

# CITY OF READING, PENNSYLVANIA

PUBLIC WORKS 503 N. 6<sup>TH</sup> SSTREET READING, PA 19601 (610) 655-6236

# CHARLES M. JONES PUBLIC WORKS DIRECTOR

January 27, 2011

Certified Mail Return Receipt Requested

Ms. Margaret L. Hutchinson, Esq. Assistant United States Attorney Civil Division Eastern District of Pennsylvania 615 Chestnut Street Suite 1250 Philadelphia, PA 19106-4476

Re: City of Reading Consent Decree
Calendar Quarterly Progress Report

4<sup>th</sup> Quarter 2010

Dear Ms. Hutchinson:

In accordance with Section VI Reporting Requirements, Paragraph 41, you will find enclosed the City of Reading's Calendar Quarterly Report. This report documents progress and status on the implementation of Section V Remedial Measures described in Paragraphs 7 through 40. Please feel free to contact me at 610-655-6236 should you have any comments or questions.

Sincerely,

Charles M. Jones, PE

Public Works Director

CMJ/ts

Enclosure

C: Christopher A. Day, Esq., US EPA

Lisa Trakis, US EPA

Lee McDonnell, PA DEP

Shawn Arbaugh, PA DEP

Carl Geffken, Managing Director

Deborah A.S. Hoag, P.E., Utilities Systems Manager

Ralph E. Johnson, Wasterwater Treatment Manager

Stephen K. Hydro, P.E., Black & Veatch

Anthony C. Vesay, P.E., Hill International

Keith Mooney, Esq., Legal Counsel

John J. Miravich, Esq., Fox Rothschild

file



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# City of Reading Consent Decree Calendar Quarterly Progress Report Period Ending December 31, 2010

# V. REMEDIAL MEASURES

#### A. General Duties

- 7. **Duty to Comply with Permit** The City's wastewater treatment plant (WWTP) was in compliance with NPDES permit parameters.
- 8. Operation and Maintenance of the Facility The City installed a trailer-mounted, portable generator at the tertiary aeration blower building. With this improvement the tertiary process continues to be aerated during power failures. We also implemented a tertiary pump station power failure procedure where we portable pump some flow through the tertiary processes. Some pre-piping was installed so the portable pumping can be setup quickly.

On October 1, 2010, there was some sporadic, minor primary settling tanks' over topping and over topping of the final settling tanks' effluent troughs due to high flows. The water remained at the bottom of the tanks and the areas were treated with lime. The Wet Weather Operation Plan (WWOP) was modified and engineering improvements are being implemented to alleviate a recurrence. On October 27, 2010, an estimated 66,400 gallon overflow occurred from the Sixth and Canal Streets Pump Station's 42" force main during a routine maintenance event. The site was cleaned up, limed and restored. Maintenance procedures were modified to assure there is no recurrence. Additionally, the force main emergency response procedure was updated to minimize any future overflows in the event of another force main incident.

#### **B.** Interim Measures

- 9. Interim Compliance Environmental Management System
  - (b) Maintenance Management System No update.
  - (c) Supervisory Control and Data Acquisition (SCADA) system
    - 2. Upgrades to SCADA System We started automating the Intermediate Pump Station recirculation valves operation within the SCADA system as an improvement to the WWOP. During this quarter the data base was updated and we started working on implementing weekly reporting from the SCADA system.
  - (d) Pretreatment Data Management System Continuing progress. The City continues the use of a commercial pretreatment database as well as an abbreviated spreadsheet for simplicity and verification.
- 10. Interim Plant Influent Monitoring No update.
- 11. Interim Trickling Filter Performance Measures
  - (a) Performance Improvements During this quarter the City serviced some secondary trickling filter ventilation piping that was clogged and

replaced tertiary aeration tank blow-off valves' that were malfunctioning. We also conducted pan tests on two of the five trickling filters.

- (d) Longer Term Monitoring and Reporting No update.
- 12. Process Control Testing The Brentwood pilot plant was relocated to the tertiary settling tanks' effluent and the operation, data and information swapping continued.

We also conducted laboratory jar testing on the tertiary settling tank influent to see if it is feasible to improve settling performance through chemical addition. The objective is to reduce the organic and solid load to the tertiary aeration tank and enhance nitrification.

- 13. Dangerous Gas Detection No update.
- 14. Certified Plant Operators No update.
- 15. Operations and Maintenance Plan No update.
- 16. Staffing Plan No update.
- 17. Interim Wet Weather Operational Strategy No update.

# C. Long Term Evaluation and Construction Schedule

18. Treatment Plant Alternatives Submission – In addition to the updates below, the City's alternatives reevaluation of the former Sixth and Canal Pump Station (6&CPS) and 42" force main (FM) replacement has been moving forward. This was formerly known as the Tunnel Project.

Hazen & Sawyer was awarded a contract to reevaluate the 6&CPS alternatives and Weston Solutions started the reevaluation of FM alternatives.

Weston Solutions completed a PNDI study and started a follow-up Red Belly turtles study. They also completed hazardous materials studies at the 6&CPS and WWTP sites. They are progressing with the in-depth investigation of the previously discovered 6&CPS ground contamination.

We are targeting to have the 6&CPS and FM reevaluations and alternatives reassessment completed during the first half of 2011.

- (a) Existing Plant Process Evaluation Report An Existing Plant Process Reevaluation Report has been finalized and submitted for your review.
- **(b)** Evaluation of Treatment Alternatives Report A draft of the Reevaluation of Treatment Alternatives Report was reviewed by the City during the quarter and the report was submitted for review by the regulatory agencies in January, 2011.
- 19. Capital Improvements Plan The Back and Veatch WWTP design will be completed or partially completed or replaced pending the Hazen & Sawyer Reevaluation of Treatment Alternatives Report. A draft of an updated Capital Improvements Plan is scheduled for submittal to the City early in the first quarter of 2011.
- 20. Request for Proposals No update.
- 21. Permit Applications and Design No update.
- 22. Permitting No update.
- 23. Construction Completion No update.
- 24. Start-Up and Operation No update.

**29.** Wet Weather Operation Plan – We updated the WWOP after the October 1<sup>st</sup> wet weather event as part of our standard practices.

# D. Collection System

- 25. GIS Mapping System In progress. See below.
  - (a) Purpose of GIS System Not applicable.
  - (b) GIS Mapping of the Sanitary Sewer Collection System In progress. Woolpert arrived September 27, 2010 to begin the pilot phase field data collection with a project kickoff meeting the following day. The initial work was with one crew to refine any system, mapping, and database issues prior to beginning phase one of the full scale project. The pilot phase data was transmitted to the City on October 31, 2010 with the City's initial review comments provided on November 19, 2010. Discussions have been ongoing to address issues noted and confirm the geodatabase structure and financial impacts prior to beginning the full scale project. Additionally, the City staff has been conducting follow-up desktop and field investigations and remedial actions from problems noted by Woolpert that impacted data collection. The full-scale data collection is anticipated to start for Phase 1 during the first quarter. Phase 1 includes the gravity sanitary sewer interceptors within the City's collection system.
  - (c) GIS Mapping of the Storm Water Collection System In progress. The third phase for field data collection and GIS mapping is the storm water system. This is included in the new GPS contract discussed above.

# 26. Sanitary Sewer System Evaluation Program

(a) I/I Analysis by Subsystem

The City continued investigating and updating the mapping required for the coordination of the collection system investigative, modeling, and rehabilitative work.

- 1. Baseline Flow and Rainfall In Progress. The hydraulic modeling of the interceptors is a key to re-evaluating priorities based on projected bottlenecks that may exist.
- 2. Hydraulic Modeling In Progress. The City has concerns about the completion of modeling until the receipt of quality GPS data from Woolpert. This task is dependent upon the GIS mapping discussed above. The pilot and first phase of the GPS project discussed in paragraph 25(b) will provide the information required for this hydraulic modeling.
- (b) Sewer System Evaluation Survey In Progress. The recently established sanitary manhole numbering system is being refined as the smoke testing and GPS field inventory show additional or missing manholes and will continue as the GPS field inventory and other system investigation progresses. The smoke testing contract was awarded by City Council on September 22, 2008 with field work beginning August 24, 2009. A measured total of 625,142 lineal feet in 2647 manhole runs were smoke tested in the subareas being investigated for inflow. Since that has been completed, there are various types of follow-up tasks being

completed by both the City and the contractor including: manhole verification for missing and additional manhole locations, dyed water tracing for suspected sources, and data compilation and organization for final reporting. The City is verifying that all the contractor's concerns about manhole numbering and layout are addressed so the final report can be issued with the manhole numbers consistent with other investigational studies and the GPS inventory. The smoke testing draft report submission is anticipated during the first quarter.

- **27.** Rehabilitation Plan No progress. The SSES is required to commence by May 7, 2008 while the dependent rehabilitation plan is due prior to the study on which it is based.
- 28. Rehabilitation of Priority Areas of Collection System No progress.
- 29. Wet Weather Operation Plan Completed.

# E. Pretreatment Program

- 30. General Duty In progress. The City has an approved pretreatment program and continues to regulate industrial users in the collection system.
- **31.** Enforcement Response Plan (ERP) Implementation In progress. The City continues to follow the ERP in order to encourage compliance from all industrial dischargers.
- 32. ERP Penalty Escalation and Compliance Schedule In progress and continuing. The City continues escalating penalties for all industries that are in significant non-compliance for a given parameter for two consecutive quarters.
- 33. ERP Order, Permit Revocation, and Federal Referral In progress. The City continues escalating the enforcement actions focusing on the financial penalties assessed to permittees who remain in significant non-compliance. This fourth quarter, two industries with long-term compliance issues have been making progress toward the final approvals of the respective municipal planning and permitting to construct on-site industrial pretreatment facilities. Also, the City conferred with US EPA regarding new problem types from an existing industry.
- 34. Local Limit Adoption by Contributing Municipalities In progress. Electronic versions of the City's sewer use ordinance had been provided to each municipality, engineer, and/or solicitor to prepare for adoption. The City has requested notification and proof of ordinance adoption be submitted. This topic is included annually in the Chapter 94 annual report information request as well as in the draft of the proposed inter-municipal agreements being discussed. Updates from each municipality are expected in the first quarter as the annual report submissions are received.
- **35.** Non-Residential Connection Evaluation and Investigation In progress. The City has been working with the contributing municipalities to obtain this information to summarize, survey, and evaluate nonresidential users that may be added to the pretreatment program.
- 36. Increased Monitoring for Violators In progress and continuing. The City continues to increase City sampling and self-monitoring for frequent violators. In general, permits may be amended or re-issued requiring multiple resamples for parameters with prior compliance issues. Some permits require increased

frequency of monitoring for multiple quarters of compliance prior to returning to a less frequent self-monitoring schedule. Additional monitoring by both the City and the industry is being tracked.

- **37. Pretreatment Computerized Management System -** In progress and continuing. The City continues data entry into a commercial pretreatment database as well as an abbreviated spreadsheet upon receipt of analytical results from both City and industrial sampling.
- 38. Local Limits Re-Evaluation Completed.
- **39.** Quarterly SNC Reports to US EPA In progress. The City will work to investigate prior years' penalty payment posting and reporting issues during the first quarter.

# F. Funding

**40.** Funding – In progress. The 2011 budget was prepared and presented to City Council with the budgeted transfer amount remaining at \$3,000,000. For cash flow purposes, the City is projecting to transfer the \$3 million during the first quarter of 2011.

The unfunded debt transaction was approved by the Court of Common Pleas on October 28, 2010, and the proceeds from the bond issue were received on December 15, 2010. Using part of the proceeds, the \$11.5 million borrowed from the Sewer Fund in 2009 was repaid in its entirety by December 31, 2010. Including the repayment, the balance in the Sewer Fund was over \$19 million on December 31, 2010.

# VI. REPORTING REQUIREMENTS

- 41. Report Contents and Certification
  - (a) Remedial Measures Paragraphs 7 through 40 See above numbered sections.
  - (b) Anticipated Problems See italics in above numbered sections.
  - (c) Additional Matters See italics in above unnumbered sections.
  - (d) Certification Statement -

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted, is to the best of my knowledge and belief, true, accurate, and complete.

Charles M. Jones, P.E.

Public Works Director

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

# **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. A client briefing/workshop was held to review the Existing Plant Process Evaluation Report (Phase 1) and receive client guidance; work continued on the Evaluation of Treatment Alternatives Report (Phase 2). Both Reports are precursors to a WWTP Capital Improvements Plan (Phase 3). A proposal was submitted to the City to assess and make recommendations regarding the existing 42" Force Main which originates at the 6<sup>th</sup> & Canal Pumping Station (6CPS). Hazardous materials assessments continued at both the 6CPS and Fritz Island sites; additional work included the preparation of the soil boring investigation report regarding the contamination at the 6CPS site. Permitting Studies continued in support of the Force Main Alternatives Assessment work. Supporting legal and Grant Administration tasks continued, including assisting with communication to DoJ and the review of the draft Inter-Municipal Agreements as well as the submission of a draft EPA Stag Grant application to the City. The project's master and draw schedules were updated. It is expected that critical items of future work will include: refinement of the Phase 1 and Phase 2 Reports, finalization of the Force Main Assessment proposal, continued work on the permitting studies in support of the pending Force Main project, and the continued assessment of the Fritz Island and 6CPS facilities for hazardous materials. A detailed task breakdown of the October work effort follows (also see respective subcontractor invoices, not attached).

# Project Management (Hill: see invoice):

- Reviewed project documents including the Phase 1 Report, permitting submittals and the draft Inter-Municipal Agreement (IMA).
- Reviewed and provided comments to the City response to 10/19/10 DoJ letter and draft Consent Decree Amendment. Prepared and submitted draft Consent Decree Timeline/bar chart; finalized message points for the mayor's meeting w/ DoJ.
- Reviewed and submitted Hazen & Sawyer's final 6CPS Assessment scope of work and supplementary letters to City.
- Finalized and submitted Weston's Force Main Alternatives Assessment Proposal;
   coordinated Weston's Fritz Island Hazmat Proposal.
- Coordinated EPA STAG Grant submission.
- Participated in discussions regarding the Phase 1 Report and future brief to DoJ.
- Reviewed and submitted Phase 1 Draft Report comments to Hazen and Sawyer; participated in the Phase 1 Report client briefing.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions, Force Main Assessment and IMA flow allocation teleconferences.
- Performed required administrative functions: progress meeting coordination, project correspondence, invoice/monthly report preparation, client and subcontractor project coordination.

• Updated the project master and draw schedules.

# Project Controls (Hill: see invoice):

 Performed required administrative functions: project schedule, Consent Decree Amendment Master Timeline, PM/CM Tasks and Costs spreadsheet updates; researched project insurance certificate requirements/corresponded with subcontractors and updated the invoice tracking log.

# Design Review/Tech Support (Hazen and Sawyer: see invoices):

- Provided review and input on document for Mayor's meeting with Department of Justice.
- Provided technical support for DoJ letters related to the Consent Decree including Phase 1 Report letter.

# Grant Funding (Duane Morris: see invoice):

• Completed draft STAG Grant Application.

# Evaluation of Treatment Alternatives (Hazen and Sawyer: see invoice):

- Continued development of alternatives for liquid and solids process including site visit.
- Developed and provided guidance for Jar Testing & Chesapeake Bay TMDL and proposed "backstops".

# Force Main (42") Alternatives Evaluation (Weston: see invoice):

- Prepared revised project schedule for Force Main (FM) Alternatives Evaluation.
- Attended meeting with City to discuss overall project status and FM scope of work.
- Provided scheduling, planning and coordination services for 30" pipe inspection and survey SOW.

### Force Main Environmental Assessment (Weston: see invoice)

- Prepared revised project schedule for Environmental Assessment which supports the FM Evaluation.
- Prepared figures and maps (e.g. property owner)in support of permit assessment.
- Coordinated and conducted field activities related to wetland and topographic surveys.
- Initiated preparation of wetland delineation report and supporting documentation.
- Performed literature search and collected information for the Phase IA Cultural Resources Report.
- Consulted with USACE, USFWS and PADEP to discuss permitting concerns.
- Visited project site to assess area for FM Alternatives and Environmental Assessment.

### 6CPS Environmental Investigations & Hazmat Survey (Weston: see invoice)

- Prepared revised project schedule for the Environmental Investigations task.
- Finalized and submitted the draft 6CPS Hazmat Report to the City.
- Prepared draft Soil Boring Investigation Report and draft Hazmat Survey Report.

Fritz Island WWTP Hazmat Survey (Weston: see invoice)

- Conducted site visit/meeting and Hazmat Survey.
- Prepared figures for use during site assessment and incorporation into final report.

Grant Administration (Duane Morris: see invoice):

• Addressed miscellaneous H2O Grant Administration matters.

6CPS Assessment (Hazen and Sawyer: see invoice):

• Reviewed existing plans and documents for pumping station & submitted request for additional info.

Cost Estimating, Value Engineering, Regulatory Compliance, Financial Analysis, Public Relations, Surveying, Construction Manager, Resident Engineer, Inspection, Health and Safety, Start-up: N/A

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

#### **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. The Existing Plant Process Evaluation Report (Phase 1) was finalized and a draft Evaluation of Treatment Alternatives Report (Phase 2) was submitted to the City. Both Reports are precursors to a WWTP Capital Improvements Plan (Phase 3). A proposal was submitted to the City to assess and make recommendations regarding the 6<sup>th</sup> & Canal Pumping Station (6CPS). Hazardous materials assessments continued at both the 6CPS and Fritz Island sites; additional work included the preparation of the draft soil boring investigation report regarding the contamination at the 6CPS site. Work continued in support of the Force Main Alternatives Assessment including inspection of an abandoned underground pipe, surveys and a hydraulics analysis of the 6CPS. Supporting legal and Grant Administration tasks continued, including assisting with communication to DoJ and the review of the draft Inter-Municipal Agreements as well as the coordination with DCED regarding PAH2O Grant requirements. The project's master and draw schedules were updated. It is expected that critical items of future work will include: refinement of the Phase 2 Report, advancement of the Force Main Assessment alternatives, continued work on the permitting studies in support of the pending Force Main project, and the continued assessment of the Fritz Island and 6CPS facilities for hazardous materials. A detailed task breakdown of the November work effort follows (also see respective subcontractor invoices).

# Project Management (Hill: see invoice):

- Prepared comments to Hazen & Sawyer's Draft Treatment Alternatives/Phase 2 Report.
- Reviewed and commented on Weston's 6CPS Hazmat Report.
- Finalized Hazen & Sawyer's 6CPS Assessment Proposal.
- Participated in a site visit for the 30"/36" abandoned pipe camera inspection.
- Attended a project meeting with PADEP officials in Harrisburg.
- Reviewed and submitted Weston's Redbelly Turtle change order to the City of Reading.
- Edited and submitted comments for the draft Consent Decree Amendment and other DoJ correspondence.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions, City Council update.
- Performed required administrative functions: progress meeting coordination, project correspondence, invoice/monthly report preparation, insurance certificate verification, as well as client and subcontractor project coordination.
- Updated the project master and draw schedules.

# Project Controls (Hill: see invoice):

Performed required administrative functions: project schedule, Consent Decree
Amendment Master Timeline, PM/CM Tasks and Costs spreadsheet updates,
assembled project insurance certificates, researched AIA specs for future bid
document preparation, coordinated with subcontractors and updated the invoice
tracking log.

Design Review/Tech Support (Hazen and Sawyer: see invoices):

- Provided technical support for the cover letter to transmit the Phase 1 Report to Do.I.
- Provided technical support for the Consent Decree Amendment.

Evaluation of Treatment Alternatives (Hazen and Sawyer: see invoice):

- Continued development and refinement of alternatives for liquids and solids processes.
- Visited the wwtp site to review the condition of the existing facilities and documentation to determine severity of spalling/cracking at Digester Control Building 4/5.

Force Main (42") Alternatives Evaluation (Hazen and Sawyer / Weston: see invoices):

- Developed Technical Memorandum to document the range of flows and allowable headlosses that can be handled by the 6<sup>th</sup> and Canal Pumping Station.
- Prepared revised project schedule for Force Main (FM) Alternatives Evaluation.
- Attended meeting with City to discuss overall project status and financial issues.
- Provided scheduling, planning and coordination services for 30" pipe inspection, 42" pipe thickness testing and subsurface soil drilling/sampling, and hydrographic and topographic site survey SOW.

Force Main Environmental Assessment (Weston: see invoice)

- Prepared revised project schedule for Environmental Assessment which supports the FM Evaluation.
- Attended meeting with City to discuss overall project status and financial issues.
- Coordinated and conducted field activities related to Alternatives Assessment.
- Prepared and submitted for review the Draft Phase IA Cultural Resource Assessment Report.
- Responded to Fish and Boat Commission request to conduct a Phase I Redbelly Turtle survey of the Force Main right-of-way area.
- Continued preparation of wetland delineation report and supporting documentation.
- Maintained contact with agencies related to permitting and sensitive species issues.

6CPS Environmental Investigations & Hazmat Survey (Weston: see invoice)

- Prepared revised project schedule for the Environmental Investigations task.
- Attended meeting with City to discuss overall project status and financial issues.
- Prepared, reviewed and issued draft of 6CPS Hazmat Report.

• Prepared draft Soil Boring Investigation Report, reviewed analytical data, and prepared associated data tables and figures.

Fritz Island WWTP Hazmat Survey (Weston: see invoice)

• Started preparation of Draft Hazmat Survey Report for Fritz Island WWTP.

Grant Administration (Duane Morris: see invoice):

• Researched insurance coverage issues and informed PM/CM team of findings.

Cost Estimating, Value Engineering, Regulatory Compliance, Grant Funding, Financial Analysis, Public Relations, Surveying, Construction Manager, Resident Engineer, Inspection, Health and Safety, Start-up: N/A

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

# **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Refinement of the Evaluation of Treatment Alternatives (Phase 2) Report, advancement of the 6<sup>th</sup> and Canal Pumping Station (6CPS) Force Main Assessment alternatives, the continuation of the permitting studies in support of the Force Main project, and the ongoing assessment of the Fritz Island and 6CPS facilities for hazardous materials highlighted the December work effort. Discussions and planning meetings were also held on the pending Capital Improvements Plan (CIP/Phase 3) report, the financial analysis of the CIP as well as the coordination of the referenced technical plans with the Inter-Municipal Agreements (IMAs). It is expected that critical items of future work will include: finalization of the Phase 2 Report, the drafting of a Capital Improvements Plan, refinement of the IMAs, the continued work associated with the 6CPS Force Main Alternatives analysis as well as the assessment of the 6CPS. A detailed task breakdown of the December work effort follows (also see the respective subcontractor invoices).

# Project Management (Hill: see invoice):

- Reviewed Phase 2 Report, submitted comments, and attended client briefing.
- Discussed Capital Improvements Plan (CIP) bid package/scheduling strategy with client and project team.
- Discussed financial analysis of CIP with client and City's financial advisor; prepared CIP correspondence to City including request for Capital Expenditure Scenarios.
- Coordinated Inter-Municipal Agreements and technical plans with client and project team.
- Coordinated Force Main Alternatives analysis and 6CPS hydraulics with project team.
- Finalized and sent Weston's Redbelly Turtle Notice to Proceed; reviewed 6CPS Hazmat report.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions, project team meetings.
- Performed required administrative functions: progress meeting coordination, project correspondence, invoice/monthly report preparation, insurance certificate verification, Primavera software research for client, as well as client and subcontractor project coordination.
- Updated the project master and draw schedules.

# *Project Controls (Hill: see invoice):*

 Performed required administrative functions: project schedule, Consent Decree Amendment Master Timeline, PM/CM Tasks and Costs spreadsheet updates, project insurance certificates, SharePoint and document management, draw schedule, Force Main Alternatives Assessment schedule, subcontractor coordination and invoice tracking log preparation.

Design Review/Tech Support (Hazen and Sawyer: see invoices):

- Discussion and teleconference regarding DoJ letter and associated response letter.
- Provided technical support for the Consent Decree Amendment.

Evaluation of Treatment Alternatives Report (Hazen and Sawyer: see invoice):

- Continued development and refinement of alternatives for liquids and solids processes.
- Presentation of Draft Treatment Alternatives Report.

Capital Improvement Plan (Phase 3) (Hazen and Sawyer: see invoice):

 Activities associated with the preparation of the Capital Improvements Plan including communications regarding the Affordability Analysis and the phasing of the project.

Force Main (42") Alternatives Evaluation (Weston: see invoice):

- Performed technical evaluations, cost estimating, team correspondences, and discussions associated with the 42-in Force Main (FM) Alternatives Assessment.
- Reviewed H&S memo regarding hydraulic information for 6&CPS and 42-in force main; participated in meeting with H&S and Hill to discuss the memo and Alternatives Analysis approach.
- Prepared revised project schedule for Force Main Alternatives Evaluation.
- Review initial draft field investigation summary report for the 30-inch pipe inspection and 42-in force main soil testing and pipe thickness testing.
- Provided technical coordination, planning, discussions, and review associated with hydrographic and topographic site survey.

Force Main Environmental Assessment (Weston: see invoice)

- Prepared revised project schedule for Environmental Assessment which supports the FM Evaluation.
- Began preparation of permit process flow diagram.
- Provided management, planning, coordination, and field oversight for execution of Redbelly Turtle survey by Herpetological Associates, Inc.
- Continued preparation of wetland delineation report and supporting documentation.
- Provided subcontractor oversight services associated with Cultural Resources Survey (Louis Berger Group).

6CPS Environmental Investigations & Hazmat Survey (Weston: see invoice)

- Completed draft soil boring investigation report, performed internal review, and issued to Hill for review and comment.
- Completed preparation, review, and issuance of the Final 6&CPS Hazmat Report based on comments received from Hill and the City.
- Provided subcontractor lead paint inspection oversight services associated with the 6&CPS HazMat assessment (Oak Group, Inc.).
- Provided subcontractor analytical oversight services associated with the 6&CPS soil boring investigation (HamptonClarke-Veritech).

Fritz Island WWTP Hazmat Survey (Weston: see invoice)

- Completed preparation and internal review of Draft Hazmat Survey Report for the Fritz Island WWTP, and issued to Hill for review and comment.
- Provided subcontractor lead paint inspection oversight services associated with the Fritz Island WWTP HazMat assessment (Oak Group, Inc.)

Cost Estimating, Value Engineering, Regulatory Compliance, Grant Funding, Financial Analysis, Public Relations, Surveying, Construction Manager, Resident Engineer, Inspection, Health and Safety, Start-up: N/A

# City of Reading Consent Decree Calendar Quarterly Progress Report Period Ending March 31, 2011

# V. REMEDIAL MEASURES

### A. General Duties

- 7. **Duty to Comply with Permit** The City's wastewater treatment plant (WWTP) was in compliance with NPDES permit parameters.
- 8. Operation and Maintenance of the Facility On March 11, 2011, there was some intermediate settling tanks' over topping due to the newly automated valve WW #3 sticking open during a high flow event. The water returned to the wastewater treatment plant (WWTP) and was sampled and metered through the WWTP effluent. The Wet Weather Operation Plan (WWOP) was modified to alleviate a recurrence.

#### B. Interim Measures

- 9. Interim Compliance Environmental Management System
  - (b) Maintenance Management System No update.
  - (c) Supervisory Control and Data Acquisition (SCADA) system
    - 1. Upgrades to the Interim SCADA System We completed automating the Intermediate Pump Station recirculation valves operation within the SCADA system as an improvement to the WWOP. We also automated valve WW #3 as an improvement to the WWOP.

During this quarter we completed work on implementing weekly reporting from the SCADA system with some issues remaining to be resolved.

- **2.** Upgrades to the SCADA System Hazen & Sawyer started a SCADA system upgrades assessment during the quarter.
- (d) Pretreatment Data Management System Continuing progress. The City continues the use of a commercial pretreatment database as well as an abbreviated spreadsheet for simplicity and verification.
- 10. Interim Plant Influent Monitoring No update.
- 11. Interim Trickling Filter Performance Measures
  - (a) Performance Improvements No update.
- **12. Process Control Testing** The Brentwood pilot plant data and information swapping was completed.

We also conducted plant scale tertiary settling tank chemical treatment testing to see if it is feasible to improve settling performance through chemical addition. The objective to reduce the organic and solid load to the tertiary aeration tank and enhance nitrification was not experienced.

We are researching other uses of chemical addition within the WWTP to improve trickling filters' and tertiary aeration tank's performance, especially nitrification.

- 13. Dangerous Gas Detection No update.
- 14. Certified Plant Operators No update.
- 15. Operations and Maintenance Plan No update.

- **16.** Staffing Plan No update.
- 17. Interim Wet Weather Operational Strategy Completed.
- C. Long Term Evaluation and Construction Schedule
  - **18.** Treatment Plant Alternatives Submission The City's alternatives reevaluation of the former Sixth and Canal Pump Station (6&CPS) and 42" force main (FM) replacement continue to move forward. This was formerly known as the Tunnel Project.

Hazen & Sawyer is reevaluating the 6&CPS alternatives and Weston Solutions is reevaluating the FM alternatives.

Weston Solutions completed a follow-up Red Belly turtles study and the PNDI study for the FM routing alternatives. They are scheduled to conduct additional 6&CPS and WWTP ground contamination studies.

We are still targeting to have the 6&CPS and FM reevaluations and alternatives reassessment completed during the first half of 2011.

In response to the meeting at the Department of Justice (DOJ) on February 03, 2011, the City is in the process of expediting a FM flow meter project. A design engineer was selected and design work has begun.

- (a) Existing Plant Process Evaluation Report No update.
- (b) Evaluation of Treatment Alternatives Report No update.
- 19. Capital Improvements Plan The Back and Veatch WWTP design will be completed or partially completed or replaced pending the Hazen & Sawyer Reevaluation of Treatment Alternatives Report. A draft of the updated Capital Improvements Plan was submitted to the DOJ on April 4<sup>th</sup>, 2011.
- 20. Request for Proposals No update.
- 21. Permit Applications and Design No update.
- 22. Permitting No update.
- **23.** Construction Completion No update.
- **24.** Start-Up and Operation No update.
- 29. Wet Weather Operation Plan We installed final settling tank effluent troughs' baffles to retain high flow events, and automated three valves within the SCADA system. We also updated the WWOP procedures after the March wet weather event as part of our event debriefing practice.

# **D.** Collection System

- 25. GIS Mapping System In progress. See below.
  - (a) Purpose of GIS System Not applicable.
  - (b) GIS Mapping of the Sanitary Sewer Collection System In progress. Woolpert performed re-inspections of features in the pilot area following City action as required. Discussions occurred regarding the geodatabase structure and financial aspects prior to beginning the full scale project. The Notice to Proceed for the full scale project was issued on February 3, 2011. Further details are in the attached report. Phase one is the larger diameter sanitary sewer system required for the hydraulic modeling with Phase two the remainder of the sanitary sewer collection.

(c) GIS Mapping of the Storm Water Collection System - In progress. The third phase for field data collection and GIS mapping is the storm water system. This is included in the new GPS contract discussed above.

# 26. Sanitary Sewer System Evaluation Program

# (a) I/I Analysis by Subsystem

The City continued investigating and updating the mapping required for the coordination of the collection system investigative, modeling, and rehabilitative work.

- 1. Baseline Flow and Rainfall In Progress. The hydraulic modeling of the interceptors is a key to re-evaluating priorities based on projected bottlenecks that may exist. The GIS inventory of the Phase 1 interceptors is key for this modeling.
- 2. Hydraulic Modeling In Progress. The City has concerns about the schedule for completing the modeling until the receipt of quality GPS data from Woolpert. This task is dependent upon the GIS mapping discussed above. The pilot and first phase of the GPS project discussed in paragraph 25(b) provide the information required for this hydraulic modeling.
- (b) Sewer System Evaluation Survey In Progress. The recently-established sanitary manhole numbering system is being refined as the smoke testing and GPS field inventory show additional or missing manholes and will continue as the GPS field inventory and other system investigation progresses. A measured total of 625,142 lineal feet in 2647 manhole runs were smoke tested in the subareas being investigated for inflow. Since that has been completed, there are various types of follow-up tasks being completed by both the City and the contractor. The City is verifying that all the contractor's concerns about manhole numbering and layout are addressed so the final report can be issued with the manhole numbers consistent with other investigational studies and the GPS inventory. One area needs to be investigated prior to the contractor finalizing the report.
- **27.** Rehabilitation Plan No progress. The SSES is required to commence by May 7, 2008 while the dependent rehabilitation plan is due prior to the study on which it is based.
- 28. Rehabilitation of Priority Areas of Collection System No progress.
- 29. Wet Weather Operation Plan Completed.

### E. Pretreatment Program

- **30.** General Duty In progress. The City has an approved pretreatment program and continues to regulate industrial users in the collection system.
- **31.** Enforcement Response Plan (ERP) Implementation In progress. The City continues to follow the ERP in order to encourage compliance from all industrial dischargers. Discussions were initiated with one industry for a consent order and agreement with a draft prepared for discussion.
- **32.** ERP Penalty Escalation and Compliance Schedule In progress and continuing. The City continues escalating penalties for all industries that are in

- significant non-compliance for a given parameter for two consecutive quarters. As penalty escalation had not been detailed in the ERP, the City has documented the process and amounts for consistency and as a reference tool.
- 33. ERP Order, Permit Revocation, and Federal Referral In progress. The City continues escalating the enforcement actions focusing on the financial penalties assessed to permittees who remain in significant non-compliance. This first quarter, two industries with long-term compliance issues received the final approvals of the respective municipal planning and permitting to construct on-site industrial pretreatment facilities. Also, the City conferred again with US EPA regarding new problem types from an existing industry.
- 34. Local Limit Adoption by Contributing Municipalities In progress. All the municipalities with permitted industries have adopted the ordinance. Electronic versions of the City's sewer use ordinance had been provided to each municipality, engineer, and/or solicitor to prepare for adoption. The City has requested notification and proof of ordinance adoption be submitted. This topic was included in the Chapter 94 annual report information request and no new municipalities provided evidence of having adopted the ordinance in 2010.
- **35.** Non-Residential Connection Evaluation and Investigation In progress. The City has been working with the contributing municipalities to obtain this information to summarize, survey, and evaluate nonresidential users in the service area that may need to be permitted.
- 36. Increased Monitoring for Violators In progress and continuing. The City continues to increase City sampling and self-monitoring for frequent violators. In general, permits may be amended or re-issued requiring multiple resamples for parameters with prior compliance issues. Some permits require increased frequency of monitoring for multiple quarters of compliance prior to returning to a less frequent self-monitoring schedule. Additional monitoring by both the City and the industry is tracked and reported annually.
- 37. Pretreatment Computerized Management System In progress and continuing. The City continues data entry into a commercial pretreatment database as well as an abbreviated spreadsheet upon receipt of analytical results from both City and industrial sampling.
- **38.** Local Limits Re-Evaluation Completed. Evaluation submitted to US DoJ and US EPA on May 5, 2006. Comments were received from US EPA and the City initially worked with B&V to address the comments and concerns.
- 39. Quarterly SNC Reports to US EPA In progress. The City has been and will continue to investigate errors in the penalty payment and posting as reported to the US EPA. Problems were discovered with the posting of prior penalties' payments within the software system as well as subsequent corrections not reflected in the reports. This system's data is also transferred to the City's accounting system so the error correction process is critical. The City is working interdepartmentally to resolve this issue for the past and determine how to do ongoing with accurate tracking and reporting in all systems as the goal.

# F. Funding

**40.** Funding – In progress. The approved transfer in the 2011 budget remains \$3,000,000. The City projected the transfer to occur in the first quarter, however it was not necessary since the City's cash flow in the first quarter was sufficient to meet expenses.

The City is preparing a schedule of transfers for all legally and budgetarily approved transfers in order to standardize the amount transferred monthly. The City has provided the sewer fund account statements to DoJ for review and proof of consent decree compliance.

# VI. REPORTING REQUIREMENTS

- 41. Report Contents and Certification
  - (a) Remedial Measures Paragraphs 7 through 40 See above numbered sections.
  - (b) Anticipated Problems See italics in above numbered sections.
  - (c) Additional Matters See italics in above unnumbered sections.
  - (d) Certification Statement -

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted, is to the best of my knowledge and belief, true, accurate, and complete.

Charles M. Jones, P.E.

Public Works Director

Page 5 of 14

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

#### **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Refinement of the Evaluation of Treatment Alternatives (Phase 2) Report for submission to DoJ, a technical report briefing to PaDEP, advancement of the 6th and Canal Pumping Station (6CPS) Force Main Assessment alternatives and supporting tasks (i.e. soil testing, pipe thickness, site survey analysis), drafting of the permitting studies reports--notably a Cultural Resources Survey, wetlands delineation and the Red Belly Turtle Report--in support of the Force Main project, and the completion/revision of the respective Fritz Island and 6CPS facilities hazardous materials reports, highlighted the January work effort. Discussions and planning meetings were also held on the pending Capital Improvements Plan (CIP/Phase 3) Report, the financial analysis of the CIP as well as the coordination of the technical and financial plans with the Inter-Municipal Agreements (IMAs). It is expected that critical items of future work will include: Phase 1 and Phase 2 Report briefings, the drafting and briefing of a Capital Improvements Plan, refinement of the IMAs, the continued work associated with the 6CPS Force Main Alternatives analysis as well as the assessment of the 6CPS. A detailed task breakdown of the January work effort follows (also see respective subcontractor invoices).

# Project Management (Hill: see invoice):

- Phase II Report: reviewed and provided comments; attended PADEP meeting and teleconferences; prepared for a planned DoJ meeting (postponed until 2/3/2011).
- Force Main Alternatives Assessment: reviewed and commented on report, including the supporting 6CPS hydraulics analysis, soil boring report and Cultural Resources Report.
- Grant Funding: discussions and correspondence regarding respective grants with client and project team.
- Performed Inter Municipal Agreement reviews and Act 537 Plan research.
- Responded to calls from prospective contractors.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions (DoJ prep, IMA refinement), financial team meeting, project team meetings, including Act 537 Planning discussions.
- Performed required administrative functions: progress meeting coordination, preparation of meeting action items, project correspondence/status, invoice/monthly report preparation, as well as client and subcontractor project coordination.
- Updated the project master, Force Main Accelerated and Draw Schedules.

# Project Controls (Hill: see invoice):

 Performed required administrative functions: project schedule, Consent Decree Amendment Master Timeline, PM/CM Tasks and Costs spreadsheet updates, document management, draw schedule, Force Main Alternatives Assessment schedule, subcontractor coordination and invoice tracking log preparation.

# Grant Funding (DMGA: see invoice):

• Discussed PennVEST funding for revised project and ACT 537 requirements.

# Force Main (42") Alternatives Evaluation (Weston: see invoice):

- Prepared draft and final Preliminary Findings and Recommendations for 42-in Force Main Alternatives Assessment technical memorandum.
- Prepared and updated project schedule.
- Continued to prepare the Draft Field Investigation Summary Report for the 30inch pipe inspection and 42-inch force main soil testing and pipe thickness testing.

# Force Main Environmental Assessment (Weston: see invoice):

- Prepared revised project schedule for Environmental Assessment which supports the FM Evaluation.
- Completed preparation of permit process flow diagram.
- Prepared Submission Form to initiate discussion with PA Historical & Museum Commission.
- Continued preparation of wetland delineation report and supporting documentation.

### Red belly Turtle Survey (Weston: see invoice)

Reviewed and prepared a draft Red belly Turtle Survey Phase I Report.

### 6CPS Environmental Investigations & Hazmat Survey (Weston: see invoice):

• Completed Revised Draft Soil Boring Investigation Report, performed internal review, and issued to City and Hill for review and comment.

# Fritz Island WWTP Hazmat Survey (Weston: see invoice):

 Completed preparation and internal review of Revised Draft Hazmat Survey Report for the Fritz Island WWTP, and issued to City and Hill for review and comment.

February 2011

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

# **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Critical items of work included the preparation for and briefing of the Phase 1 and Phase 2 Reports to DoJ/EPA/PaDEP, the writing and internal briefing of the draft Capital Improvements Plan (CIP), refinement of the IMAs, the continued work associated with the 6CPS Force Main Alternatives analysis as well as the assessment of the 6CPS. Additional work included the scoping of a modified Act 537 statement of work, the initial scoping of the 42" Force Main flow meter project and the initial draft of the accompanying EPA grant application. Discussions and planning meetings were also held on the pending Capital Improvements Plan (CIP/Phase 3) Report, the financial analysis of the CIP as well as the continued coordination of the technical and financial plans with the Inter-Municipal Agreements (IMAs). It is expected that critical items of future work will include: preparation of the DoJ deliverables, refinement of the CIP, further refinement of the flow meter project and selection of a design acquisition strategy and the delivery of the final Wetlands Delineation Report (Force Main project). A more detailed task breakdown of the February work effort follows (also see respective subcontractor invoices).

# Project Management (Hill: see invoice):

- Phase I & II Report: attended DoJ meeting and pre-brief, reviewed and compiled DoJ action items tracker, prepared executive level schedule.
- Phase III Report: participated in an internal meeting to discuss the WWTP's Capital Improvements Plan.
- Act 537 (Modified) Plan: provided a draft SOW to the client and project team.
- Force Main (FM) Alternatives Assessment: participated in Force Main (42") Flow Meter project discussions with the project team.
- Grant Funding: discussions and correspondence regarding respective grants with client and project team; reviewed draft EPA STAG Grant application.
- Legal: participated in internal, DoJ pre-briefs and internal IMA discussions.
- Fritz Island Hazmat, FM Assessment, 6CPS Contamination, Red Belly Turtle Reports: reviewed and provided comments.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions (for EPA Grant Funding coordination and DoJ meeting), financial team meeting, project team meetings, including Act 537 Planning discussions.
- Performed required administrative functions/project controls: progress and financial meeting coordination, preparation of meeting action items, project correspondence/status, invoice/monthly report preparation, as well as client and subcontractor project coordination.
- Updated the Project Master, Force Main Accelerated and Draw Schedules; prepared and briefed a draft revenue versus costs diagram.

# Project Controls (Hill: see invoice):

Performed required administrative functions: project schedule updates, Share
Point access and graphs, Expenses versus Revenue chart creation, PM/CM Tasks
and Costs spreadsheet updates, document management, draw schedule, change
order preparation, subcontractor coordination and invoice tracking log updates.

Design Review / Tech Support (H&S: see January and February invoices):

- Attended City of Reading and PADEP meeting including pre-meeting activities and follow-up. (Jan)
- Supported Hill and Weston's efforts for the force main, including conference calls. (Jan)
- Provided support and participated in conference calls related to Act 537 planning. (Jan)
- Attended IMA meeting and provided technical assistance with IMAs. (Feb)

# Grant Funding (DMGA: see invoice):

- Discussed EPA STAG grants and prepared draft application.
- Prepared H2O PA application and grant agreement.

# Evaluation of Treatment Alternatives Report (Phase II) (H&S: see January invoice):

 Provided revisions to the Phase II Report for issuance to the Department of Justice.

### CD Paragraph 18 Issues (H&S: see February invoice):

- Prepared for the Consent Decree meetings with the City and Department of Justice.
- Prepared presentation for the Department of Justice.

### Phase II Report; Out-of-Scope Work (H&S: see January invoice):

- Prepared for the Consent Decree meetings with the City and Department of Justice.
- Prepared presentation for the Department of Justice.

### Capital Improvements Plan (Phase III) (H&S: see January and February invoices):

- Provided activities associated with the preparation of Capital Improvements Plan including communications regarding the Affordability Analysis and the phasing of the project. (Jan)
- Provided activities associated with the preparation of the Capital Improvements Plan and the O&M cost spreadsheets for the financial team. (Feb)

Force Main (42") Alternatives Evaluation (Weston: see invoice):

- Prepared and issued updated Final Preliminary Findings and Recommendations for 42-in Force Main Alternatives Assessment technical memorandum based on City and Hill discussions and comments.
- Prepared and updated schedules for design and construction of force main alternatives.
- Continued to prepare the Draft Field Investigation Summary Report for the 30inch pipe inspection and 42-inch force main soil testing and pipe thickness testing.

Flowmeter Design Support/Supplemental Soil Borings (Weston: see invoice):

- Conducted site visit to WWTP with City and Hill to assess location of new flow meter for 42-inch force main and Fritz Island sink hole issues.
- Prepared project schedules for design and construction as well as conceptual design schematics and a cost estimate for 42-inch force main flow meter project.
- Conducted meeting with City and Hill to review design/construction schedules and discuss alternatives.

Force Main Environmental Assessment (Weston: see invoice):

- Prepared updated project schedule for scope of work for Environmental Assessment.
- Continued preparation of wetland delineation report and supporting documentation; reviewed and coordinated survey mappings with wetland areas.
- Prepared and reviewed submission to Pennsylvania Museum and Historical Commission which included Environmental Review Form and Cultural Resources Phase IA report.

Red belly Turtle Survey (Weston: see invoice)

• Prepared, reviewed and issued Final Red belly Turtle Survey Phase I Report to City and Hill.

6CPS Environmental Investigations & Hazmat Survey (Weston: see invoice):

 Prepared and issued Final Soil Boring Investigation Report to City and Hill based on comments received.

Fritz Island WWTP Hazmat Survey (Weston: see invoice):

• Started preparation of the Final Hazmat Survey Report for the Fritz Island WWTP based on input from the City and Hill.

6CPS Assessment (H&S: see January and February invoices):

- Reviewed existing pump station drawings. (Jan and Feb)
- Evaluated existing pumping station hydraulics. (Jan and Feb)
- Participated in internal meetings with computational fluid dynamics (CFD) modeler and hydraulics engineer. (Jan and Feb)

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer March 2011 DRAFT

# **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Critical items of work included preparation of the DoJ deliverables, preparing the Request for Proposal for the Fritz Island flow meter project, scoping of a draft Act 537 Special Study, refinement of the technical component of the Capital Improvements Plan (Phase 3 Report) and the Force Main Alternatives Analysis Report. Supporting tasks included the finalization of the internal IMA, coordination with EPA regarding the approved STAG grants and discussions regarding the Plan of Finance for the Capital Improvements Program. It is expected that critical items of future (April) work will include: submission of the DoJ deliverables, submission of a draft technical report of the CIP and refinement of the Force Main Alternatives Report, discussions with PaDEP regarding the Act 537 Special Plan of Study, design initiation of the flow meter project, IMA negotiations with supported municipalities as well as supporting financial analysis and grant funding tasks. A more detailed task breakdown of the March work effort will follow with the complete PM/CM Work Report, including respective sub consultant reports.

# Project Management (Hill: full report pending):

- Phase III Report: reviewed H&S's Capital Improvements Plan, provided comments and briefed City.
- Act 537 Special Plan of Study: refined the proposed statement of work.
- Force Main (FM): participated in the Force Main (42") Flow Meter project RFP discussions, proposal review of designer submissions and amendment preparation with the project team.
- Grant Funding: discussions and correspondence regarding respective grants with client and project team.
- Legal: participated in internal Inter Municipality Agreement (IMA) discussions.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions (for EPA Grant Funding, Plan of Finance and Flow meter coordination), financial team meeting, project team meetings, including Act 537 Planning discussions.
- Performed required administrative functions/project controls: progress and meeting coordination, preparation of meeting action items, project correspondence/status, PM/CM reconciliation amendment preparation, invoice/monthly report preparation, as well as client and subcontractor project coordination.
- Updated the Project Master, Collection System and Draw Schedules; finalized master schedules for DoJ.

Project Controls (Hill: full report pending):

Performed required administrative functions: project schedule updates, PM/CM
Tasks and Costs spreadsheet updates, document management, draw schedule,
change order/modification preparation, subcontractor coordination and invoice
tracking log updates.





# Progress as of 03-21-11

### Pilot Project

- Woolpert spatially collected and inspected the pilot study area during the month of October 2010. This collection included the sanitary trunkline, other sanitary manholes and portions of the stormwater system. Approximately 250 features were collected.
- Also during this timeframe Woolpert was investigating the GPS capabilities of the Virtual Reference Station (VRS) system. Finding some discrepancies in the GPS corrections from this service, Woolpert spent a few days establishing an accurate position on a temporary survey mark at the City service center facility and based the Pilot data on this newly established mark.
- John Goshert (City) assisted the 2-man Woolpert field crew during this phase on misc. access and coordination needs.
- Once the Pilot study was completed, Woolpert provided a draft deliverable to the City for review 10-29-10.
- The City coordinated with their maintenance crews to further investigate 'problematic' features that were documented in the Geodatabase (GDB), including negative slopes from the Woolpert field survey.
- Maintenance performed general services to clean pipes, remove debris, cut through obstructing roots and raise manholes to grade. All efforts were documented and sent to Woolpert for review.
- Woolpert reviewed the above notes and performed a 'second' field sweep on the pilot data to update the GDB.
- A couple MHs will need further service due to under being under a tree and its roots...
- Woolpert will redeliver the updated pilot data the week of March 28<sup>th</sup> 2011.

### Revised Geodatabase

- From the pilot study, there were changes that the City wanted to refine in the feature/attribute table of the geodatabase.
- Many conference calls were necessary to discuss NASSCO PACP changes into the table. Woolpert introduced Craig Watts, their NASSCO certified trainer, into the talks. Conversations included; what feature/attributes to include, what not to include, how to standardize with some attributes conflicting with the MACP standards, how these changes will affect the field workflow, etc.
- Other changes to the GDB included changing the format and renaming some of the fields, created raster field for photos, eliminating 'rung steps' and 'structure condition' as another inspection contract may be better suited for these attributes and some other modifications.
- Along with the updated GDB, Woolpert also went back to the Pilot dataset and made the corresponding changes to the actual pilot data for the draft deliverable
- A revised GDB was delivered on 2-21-11.

#### Sanitary Base Map Update

- The Project Team agreed it was necessary to develop a most up-to-date base map for navigating and deciphering the sanitary manholes in the field, especially since the City spent time and effort on smoke testing and other investigation efforts to build a better map.
- The City asked Woolpert to update the existing sanitary GIS layer with these updates.
   Most importantly the proper unique ID for all the sanitary manholes were updated.
- John Goshert worked with Mark Humphrey (Woolpert) to provide a hard copy map of marked up notes from the field investigations.
- Mark and John worked together to come up with the most up-to-date map from these resources.
- Woolpert delivered this revised sanitary GIS layer on 3-08-11.

#### **Amendment Discussion/Document**

- During early conversations with the City, Woolpert discussed the potential need for additional Surveying and GIS services for some necessary modifications to the contract.
- After many discussions, Woolpert provided a document to the City on 2-22-11.
- In the document, a few line items were discussed:
  - o Providing field surveying of 'GPS obscured' features beyond the estimated 1%,
  - o Densification of a localized/usable survey control monumentation network,
  - o GPS base station v. VRS logistics,
  - o Problematic Resolution Form (PRF) Website, and
  - o Other misc. related surveying and GIS services.
- The City is reviewing this document.

### Phase I (Trunkline)

- Woolpert Received the official NTP Letter for Phases I-III on Feb. 3<sup>rd</sup> 2011.
- Once the GDB was revised and the sanitary base map was updated, Woolpert field crews began the inventory on the sanitary trunkline – Phase I.
- Phase I field effort began 2-8-11.
- Field crews began their trunkline inventory efforts in the northern section of the City along Hiesters Lane near Kutztown Road.
- During the last few weeks, crews have collected ~300 sanitary trunkline manholes (15" or greater) along with an associated upstream manhole.
- Per the RFP, there are approximately 604 sanitary manholes in this phase.
- In the coming weeks, Woolpert will continue to make positive progress on Phase I. We are expecting to have the initial sweep of Phase I completed in the month of April.

### Phase II (Remaining Sanitary)

- Woolpert has contacted the City to review the break down of the remaining phases: by basin, by priorities, by utility system, and any unique field circumstances
- No anticipated start date at this time.

# City of Reading Consent Decree Calendar Quarterly Progress Report Period Ending September 30, 2011

# V. REMEDIAL MEASURES

#### A. General Duties

7. **Duty to Comply with Permit** – The City's wastewater treatment plant (WWTP) was in compliance with NPDES permit parameters.

During Hurricane Irene and Tropical Storm Lee the City experienced multiple leaks in the Sixth and Canal Streets Pump Station's (6&CPS) 42" force main (FM) that resulted in three discharges to the Schuylkill River.

8. Operation and Maintenance of the Facility - No update.

#### B. Interim Measures

- 9. Interim Compliance Environmental Management System
  - (b) Maintenance Management System No update.
  - (c) Supervisory Control and Data Acquisition (SCADA) system
    - 1. Upgrades to the Interim SCADA System No update.
    - 2. Upgrades to the SCADA System No update.
  - (d) Pretreatment Data Management System Continuing progress. The City continues the use of a commercial pretreatment database as well as an abbreviated spreadsheet for simplicity and verification.
- 10. Interim Plant Influent Monitoring No update.
- 11. Interim Trickling Filter Performance Measures
  - (a) Performance Improvements No update.
- 12. Process Control Testing No update.
- 13. Dangerous Gas Detection No update.
- 14. Certified Plant Operators No update.
- 15. Operations and Maintenance Plan No update.
- 16. Staffing Plan Through a planned restructuring of the WWTP team four obsolete operations positions were eliminated, four maintenance positions were enhanced and two professional positions (Wastewater Utilities Engineer and Project Accountant) have been added. This restructuring has positioned us to be better prepared for the WWTP's future needs.
- 17. Interim Wet Weather Operational Strategy No update.
- C. Long Term Evaluation and Construction Schedule This remedial measure reporting includes activities associated with pump stations, force mains and Act 537 planning. Costs are for construction only.

The City is out to bid for the 42" flow-meter replacement located on Fritz Island. This meter project will confirm the WWTP's present flows and loadings. This \$3.7M project will be financed with a combination of two \$500k EPA STAG

grants and Sewer Fund/Bond reserves. The start of construction is scheduled for later this year.

The City's PaDEP 537 Planning Special Study contract is nearing completion. This study will confirm the future flows and loadings for the WWTP. The project is being financed with Sewer Fund/Bond reserves. The next steps are updating the previously submitted reports published by Hazen and Sawyer, submittal to Berks County for comment, a public comment period and submittal to PaDEP. Ultimately, DoJ approval will be needed for the revised Existing Plant Process Evaluation Report, Evaluation of Treatment Alternatives and the resulting Capital Improvements Plan.

The City's selected alternative of designing and constructing a new 42" force main (FM) with lining the old FM for redundancy is 75% complete. The \$18M project is being financed with a \$5M H2O grant, Sewer Fund/Bond reserves and possibly a PennVEST grant and/or loan. Additionally, there is an emergency plan to temporarily bypass around the failing section of the FM as an interim measure to avoid the recurring discharges to the Schuylkill River. The \$2.2M emergency plan is scheduled to be financed by Sewer Fund reserves. An emergency permit was submitted to the PaDEP on 10/17/2011. The emergency work is planned to start ASAP this year and the FM project is scheduled to start construction in March of 2012.

Hazen & Sawyer has submitted the Sixth and Canal Pump Station (6&CPS) reevaluation.

Weston Solutions is conducting additional soil and groundwater contamination studies at the 6&CPS.

#### 18. Treatment Plant Alternatives Submission

- (a) Existing Plant Process Evaluation Report No update.
- (b) Evaluation of Treatment Alternatives Report No update.
- 19. Capital Improvements Plan An update to the Capital Improvements Plan will be prepared once the 537 Planning Special Study is completed.
- **20.** Request for Proposals The City issued a Notice to Proceed for Hazen & Sawyer to prepare a Request for Proposal (rfp) for a Primary Anaerobic Digester Rehab design project. There is a \$1M H2O grant available toward this rehab project.
- **21. Permit Applications and Design** Various permit applications were submitted to the regulators for the 42" FM project on 9/27/2011. As noted, an emergency bypass permit for the 42" FM was submitted on 10/17/2011.
- **22. Permitting** Various permit applications have been approved by the regulators for the 42" flow-meter project.
- 23. Construction Completion No update.
- 24. Start-Up and Operation No update.

# **D.** Collection System

- 25. GIS Mapping System In progress. See below.
  - (a) Purpose of GIS System Not applicable.
  - (b) GIS Mapping of the Sanitary Sewer Collection System In progress. Woolpert delivered the phase one data collection following modification to the geodatabase. The City reviewed and provided comments. Woolpert continues to update a base map for use by the field crews based upon findings by the City while investigating specific areas. Woolpert proceeded with two crews upon beginning phase two data collection. The website for resolving problem features was launched with issues still being addressed. Further project details are in the attached report. Phase one is the larger diameter sanitary sewer system required for the hydraulic modeling with Phase two the remainder of the sanitary sewer collection.
  - **(c) GIS Mapping of the Storm Water Collection System -** In progress. The third phase for field data collection and GIS mapping is the storm water system. This is included in the new GPS contract discussed above.

# 26. Sanitary Sewer System Evaluation Program

(a) I/I Analysis by Subsystem

The City continued investigating and updating the mapping required for the coordination of the collection system investigative, modeling, and rehabilitative work.

- 1. Baseline Flow and Rainfall In Progress. The hydraulic modeling of the interceptors is a key to re-evaluating priorities based on projected bottlenecks that may exist. The GIS inventory of the Phase 1 interceptors is required for this modeling.
- 2. Hydraulic Modeling In Progress. The pilot and first phase of the GPS project discussed in paragraph 25(b) provide the information required for this hydraulic modeling. With learning the prior consultant will not be performing this work, a new scope of services and request for proposals is being developed.
- (b) Sewer System Evaluation Survey In Progress. The sanitary manhole numbering system is refined continually as field inventory show additional or missing manholes and will continue as the inventory and system investigations progress. The City and contractors are addressing manhole numbering and layout so the final report can be issued with identification consistent throughout. This is critical as additional manholes and sub-basin numbering issues continue to be discovered. A system for using aliases or tracking is necessary so all data can be referenced in the future. One area still needs to be investigated prior to the contractor finalizing the report. The computerized maintenance management system implementation project made progress toward restarting full-scale for geospatially-oriented tracking of preventive and corrective maintenance as well as repairs. The City needs to update PCs to be using the system as well as purchase the server to host the software.

- **27.** Rehabilitation Plan No progress. The SSES is required to commence by May 7, 2008 while the dependent rehabilitation plan is due prior to the study on which it is based.
- 28. Rehabilitation of Priority Areas of Collection System No progress.
- 29. Wet Weather Operation Plan Completed.

# E. Pretreatment Program

- 30. General Duty In progress. The City has an approved pretreatment program and continues to regulate industrial users in the collection system.
- 31. Enforcement Response Plan (ERP) Implementation In progress. The City continues to follow the ERP in order to encourage compliance from all industrial dischargers. Discussions continued with one industry for a consent order and agreement with revisions made while the industry continued to implement the chosen alternative. Their pretreatment system may be on-line prior to this being finalized.
- **32. ERP Penalty Escalation and Compliance Schedule** In progress and continuing. The City continues escalating penalties for all industries that are in significant non-compliance for a given parameter for two consecutive quarters. As penalty escalation had not been detailed in the ERP, the City has documented the process and amounts for consistency and as a reference tool.
- 33. ERP Order, Permit Revocation, and Federal Referral In progress. The City continues escalating the enforcement actions focusing on the financial penalties assessed to permittees who remain in significant non-compliance. The City continues to confer with US EPA while attempting to have industries achieve compliance. One industry has been problematic for an extended time following a compliance agreement in recent history. US EPA has begun investigating their history and requested additional information from the industry to do so.
- 34. Local Limit Adoption by Contributing Municipalities In progress. All the municipalities with permitted industries have adopted the ordinance. Electronic versions of the City's sewer use ordinance had been provided to each municipality, engineer, and/or solicitor to prepare for adoption. This requirement is detailed in the draft version of a revised intermunicipal agreement being circulated to and reviewed by the contributing municipalities.
- **35.** Non-Residential Connection Evaluation and Investigation In progress. The City has been working with the contributing municipalities to obtain this information to summarize, survey, and evaluate nonresidential users in the service area that may need to be permitted.
- 36. Increased Monitoring for Violators In progress and continuing. The City continues to increase City sampling and encourage increased self-monitoring for frequent violators. In general, permits may be amended or re-issued requiring multiple resamples for parameters with prior compliance issues. Some permits require increased frequency of monitoring for multiple quarters of compliance prior to returning to a less frequent self-monitoring schedule. Additional monitoring by both the City and the industry is tracked and reported.
- **37. Pretreatment Computerized Management System -** In progress and continuing. The City continues data entry into a commercial pretreatment

database as well as an abbreviated spreadsheet upon receipt of analytical results from both City and industrial sampling.

- **38.** Local Limits Re-Evaluation Completed. Evaluation submitted to US DoJ and US EPA on May 5, 2006. Comments were received from US EPA and the City initially worked with B&V to address the comments and concerns.
- **39. Quarterly SNC Reports to US EPA** In progress. The City has been monitoring penalty payment status and will continue to investigate errors in the penalty payment and posting as reported to the US EPA. The City is working interdepartmentally to resolve this issue for the past and determine how to do ongoing with accurate tracking and reporting in all systems as the goal.

# F. Funding

**40. Funding** – In progress. The City transferred the \$3 million in the third quarter to maintain a sufficient balance in the City's general fund and to prepare for the debt service payments in November and its effect on cash flow.

The City, as part of the Act 47 process, has been revising its Financial policies and reviewing past accounting transactions with its external auditor, Herbein & Co. Based on our mutual work, it was determined that the City booked the payment of the indirect costs from several of the enterprise funds, sewer fund included, as a "due to/due from" instead of transferring the cash. As a result of this, the sewer fund owes the general fund approximately \$6 million as of August 31, 2011. The City will provide documentation under a separate cover.

The work on the plan of finance to raise the necessary funds for the WWTP and conveyance system projects is continuing. The plan of finance is predicated on the completion of the 537 plan and the revision of documents related to paragraphs 18a, 18b, and 19.

The City is also continuing its work on the application for PennVest funds. We originally planned on submitting the application for the November application cycle, however all permits and plans are required before doing so. Since they will not be completed in time, we will submit an application in February 2012.

# VI. REPORTING REQUIREMENTS

- 41. Report Contents and Certification
  - (a) Remedial Measures Paragraphs 7 through 40 See above numbered sections.
  - **(b) Anticipated Problems** See italics in above numbered sections.
  - (c) Additional Matters See italics in above unnumbered sections.
  - (d) Certification Statement -

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who

manage the system, or the person(s) directly responsible for gathering the information, the information submitted, is to the best of my knowledge	
Charles M. Jones, P.E.	Date
Public Works Director	

**July 2011** 

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

### **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Critical items of work included: finalization of and submission of the flow meter construction bid documents to EPA and PaDEP, review of the Act 537 Special Plan of Study, initiation/oversight of the 42" force main design, refinement of the draft 6CPS CIP, submission of a draft digester technical memorandum and the continuation of IMA and financial/grant tasks. Anticipated future items of (August) work include: continued oversight of the force main design including supplemental permitting studies and hydraulic analysis to support evaluation of an alternate route, refinement of the primary digester rehabilitation schedule, advertisement of the wwtp flow meter project, assistance with the ongoing Act 537 Special Study, and a monthly project update with the PaDEPA, including the submission of a project status report to DoJ, EPA, PaDEP. A more detailed task breakdown of the July work effort follows (also see respective subcontractor invoices).

# Project Management (Hill: see invoice):

- Force Main (42") Design: provided assistance to the designer and participated in a 5% design workshop.
- WWTP Flow Meter project: assisted with the finalization of the construction bid documents.
- Act 537 Special Plan of Study: reviewed SSM's Act 537 deliverables and attended a project update.
- Grant Funding: participated in discussions and correspondence regarding respective grants with client and project team.
- Legal: participated in internal Inter Municipality Agreement (IMA) discussions.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions, financial team coordination (Grant Funding, Plan of Finance) and project team meetings.
- Performed required project controls/administrative functions: progress and meeting coordination, preparation of meeting action items, project correspondence/status, invoice/monthly reports, CM personnel requirements spreadsheet, review of electronic bidding and Contract Management processes.
- Updated the Project Master and Draw Schedules.

# Project Controls (Hill: see invoice):

Performed required project controls functions: project schedule updates, PM/CM
Tasks and Costs spreadsheet updates, document management, draw schedule
updates, extranet site management, subcontractor coordination and invoice
tracking log updates.

 Prepared front-end document recommendations regarding scheduling, reviewed the draft bid documents including the project manual, reviewed agreement for consistency, and compared engineer and project manager roles.

## Design Review/Tech Support (H&S: See Invoice)

• Prepared for and attended July 25, 2011 meeting regarding contracts.

## *Grant Funding (DMGA: see invoice):*

- Discussed H2O PA Grant II expiration date and project financing.
- Researched DEP Watershed Program.
- Researched PennVEST Program and prepared email to update City of Reading personnel.

## CD Paragraph 18 Issues (H&S: See Invoice)

• Evaluated the rehabilitation of the anaerobic digesters including development of technical memorandum, conceptual costs and schedule.

### Act 537 Special Plan of Study RFP (H&S: see invoice):

- Participated for and attended July 25, 2011 meeting and July 29, 2011 meeting.
- Uploaded information to the extranet site.

Flow Meter Design Support and Supplemental Soil Boring Investigation (Weston: see invoice)

- Prepared and issued *Final Supplemental Soil Boring Report* for 6&CPS based on Hill and City comments.
- Reviewed Entech 90% design submittal and construction contract RFP for the WWTP flow meter design project.
- Attended July 13, 2011 100% design review meeting for WWTP flow meter design project.

Force Main (42") Design Support (Weston: tasks include previously unbilled work for May/June/July; see invoice)

- Prepared and reviewed Statement of Work (SOW), bid form, and contract documents for 42-inch Force Main Designer RFP; revised and reissued until approved as final by Hill and City. (May)
- Attended May 18, 2011 meeting at WWTP to discuss 42-inch Force Main Designer RFP SOW. (May)
- Participated in client and project team discussions and teleconferences regarding 42-inch Force Main Designer RFP; prepared, reviewed and responded to associated project correspondences. (May)
- Attended June 6, 2011 Bid Walk for 42-inch Force Main Designer RFP. (June)
- Prepared response to bidder questions for 42-inch Force Main Designer RFP.
   (June)

- Participated in June 7, 2011 teleconference with Hill/City to discuss Grant funding and response to bidder questions for 42-inch Force Main Designer RFP. (June)
- Attended June 14, 2011 42-inch Force Main Designer proposal review meeting at Reading Public Works Office. (June)
- Attended June 21, 2011 Designer interview sessions at Reading City Hall for 42-inch Force Main Designer RFP. (June)
- Prepared, reviewed, and issued project schedule for 42-inch Force Main construction. (June)
- Participated in client and project team discussions and teleconferences regarding 42-inch Force Main Designer RFP; prepared, reviewed and responded to associated project correspondences. (June)
- Attended July 14, 2011 Designer (Entech) Kick-Off Meeting for 42-inch Force Main Design Project. (July)
- Prepare for and attend July 25, 2011 5% Design Review Meeting at WWTP for 42-inch Force Main Design Project; followed-up on issues and action items identified during this meeting. (July)
- Performed evaluations and investigations associated with 42-inch Force Main alternate route. (July)
- Participated in client and project team discussions and teleconferences regarding 42-inch Force Main Designer RFP; prepared, reviewed and responded to associated project correspondences. (July)

## Force Main (42") Environmental Assessment (Weston: see invoice)

- Coordinated completion of Jurisdictional Determination (JD) package with USACE.
- Prepared Environmental Permitting and Assessment Draft Summary Report, and prepared Final Report upon approval from Hill and City.
- Participated in client and project team discussions; prepared, reviewed, and responded to associated project correspondences.
- Coordinated subcontractor services associated with Cultural Resources Survey (Louis Berger Group).

### Fritz Island WWTP Hazmat Assessment (Weston: see invoice)

• Prepared and submitted *Final Hazmat Survey Report for the Fritz Island WWTP* based on comments received from Hill and City.

### 6CPS Assessment (H&S: see invoice)

- Prepared for and attended July 19, 2011 meeting.
- Prepared and submitted the final draft of the Capital Improvements Plan.
- Prepared and submitted a technical memorandum for the 54-inch Interceptor.

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

### **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Critical items of work included: continued oversight of the force main design including supplemental permitting studies and hydraulic analysis to support evaluation of an alternate route, refinement of the primary digester rehabilitation schedule, refinement/response to regulator questions regarding the wwtp flow meter bid documents, assistance with the ongoing Act 537 Special Study, a client briefing regarding the 6<sup>th</sup> and Canal Pump Station (6CPS) Report, a monthly project update with the PaDEP, including the submission of a project status report to DoJ, EPA, PaDEP and continued support with legal, financial analysis and grant Anticipated future items of (September) work include: funding requirements. advertisement of the wwtp flow meter construction bid documents, continued review of the Act 537 Special Plan of Study and 42" force main design, submission of a draft statement of work for the rehabilitation of the primary digesters, and participation in a PennVEST initial consult for the force main project. A more detailed task breakdown of the August work effort follows (also see respective subcontractor invoices).

## Project Management (Hill: see invoice):

- Force Main (42") Design: provided assistance to the designer and participated in two site visits and a 30% design workshop; scoping and coordination of additional permitting studies and design support proposal.
- WWTP Flow Meter project: assisted with the refinement of the construction bid documents/contract.
- 6CPS: Reviewed and provided comments regarding the Capital Improvements Plan.
- Digester Rehabilitation: reviewed, provided comments and submitted the schedule to the client.
- Act 537 Special Plan of Study: reviewed consultant's Act 537 deliverables and attended a project update.
- Grant Funding: participated in discussions and correspondence regarding respective grants with client and project team.
- Legal: participated in internal Inter Municipality Agreement (IMA) discussions and DoJ correspondence.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions, financial team coordination (Grant Funding, Plan of Finance) and project team meetings.
- Performed required project controls/administrative functions: progress and meeting coordination, preparation of meeting action items, project correspondence/status, invoice/monthly reports, CM personnel requirements spreadsheet and PM/CM Tasks/Budget worksheet.
- Updated the Project Master, Construction and Draw Schedules.

- *Project Controls (Hill: see invoice):*
- Performed required project controls functions: project schedule updates, PM/CM
  Tasks and Costs spreadsheet updates, document management, draw schedule
  updates, extranet site management, consent decree tracker updates, amendment
  documents preparation, creation of action items spreadsheet, subcontractor
  coordination and invoice tracking log updates.

## Design Review/Tech Support (H&S: See Invoice)

Provided assistance to legal team.

## Grant Funding (DMGA: see invoice):

- Provided assistance to Reading on Categorical Exclusion checklist.
- Reviewed and discussed project financing.
- Reviewed bidding/construction document requirements regarding PennVEST and H2O PA Grant.
- Reviewed PennVEST application form for information needed to complete.

### CD Paragraph 18 Issues (H&S: See Invoice)

- Reviewed scope of work for RFP and technical oversight of Digester Rehabilitation.
- Revised project schedule for Digester Rehabilitation.
- Participated in conference call with PADEP on August 12, 2011.

## Act 537 Special Plan of Study RFP (H&S: see invoice):

- Prepared for and attended August 26, 2011 meeting.
- Reviewed first draft report.

### Force Main (42") Design Support (Weston: see invoice)

- Attended August 3, 2011 design review meeting at WWTP for the 42-inch force main project.
- Reviewed and provided comments on 30% design meeting minutes; reviewed 30% design submittal; and followed up on design review meeting action items.
- Attended August 22, 2011 site meeting to assess a potential alternate pathway for the 42-inch force main around a Norfolk Southern bridge abutment.
- Performed technical and hydraulic evaluations and investigations associated with the potential 42-inch force main alternate route.
- Participated in client and project team discussions on the 43-inch force main design project.
- Coordinated geotechnical subcontractor services (William L. Deutsch, PhD) for participation in July 14, 2011 kick-off meeting for the 42-inch force main project.

### Force Main (42") Environmental Assessment (Weston: see invoice)

• Prepared Environmental Permitting and Assessment Final Summary Report, and issued to Hill and City.

 Participated in technical evaluations, assessments, project team discussions and correspondences associated with permitting impacts on potential alternate new force main route.

## Force Main (42") Supplemental Permitting Studies (Weston: see invoice)

• Participated in discussions, correspondences, planning and subcontractor coordination associated with supplemental permitting efforts for the potential alternate new force main route.

## Fritz Island WWTP Hazmat Assessment (Weston: see invoice)

• Reviewed and addressed Hill and City comments for preparation of *Final Hazmat Survey Report for the Fritz Island WWTP*.

## 6CPS Assessment (H&S: see invoice)

- Prepared technical memorandum to document and comment upon previous design technical memorandum.
- Provided assistance with alternative route evaluation for force main.

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

### **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Critical items of work included: finalization and advertisement of the wwtp flow meter construction bid documents, continued review of the Act 537 Special Plan of Study, 42" force main design, including permitting discussions with regulators and potential impacted stakeholders, emergency repair options, submission of a draft PM statement of work for the rehabilitation of the primary digesters, assistance with a metering RFP, participation in a PennVEST initial consult for the force main project and a monthly project update with DoJ/EPA/PADEP. Anticipated future items of (October) work include: flow meter bid evaluation, finalization and analysis of the Act 537 Plan, primary digester rehabilitation analysis, 42" force main design support, including the emergency bypass. A more detailed task breakdown of the September work will be included in the respective PM/CM's subcontractor invoices (pending).

### Project Management:

- Force Main (42") Design: provided assistance to the designer and participated in a 60% review workshop; scoping and coordination of additional permitting studies and design support proposal. Assistance with scoping, permitting and contract development for the Emergency Force Main project.
- WWTP Flow Meter project: assisted with the refinement of the construction bid documents/contract and advertisement of the bid documents.
- Primary Digester Rehabilitation: review and submission of a PM/CM statement of work.
- Act 537 Special Plan of Study: reviewed consultant's Act 537 deliverables and attended a project update.
- Grant Funding: participated in discussions and correspondence regarding respective grants with client and project team.
- Legal: participated in internal Inter Municipality Agreement (IMA) discussions, assistance with a metering RfP and DoJ correspondence.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions, financial team coordination (Grant Funding, Plan of Finance) and project team meetings.
- Performed required project controls/administrative functions: progress and meeting coordination, preparation of meeting action items, project correspondence/status, invoice/monthly reports, CM personnel requirements spreadsheet and PM/CM Tasks/Budget worksheet.
- Updated the Project Master, Construction, Draw Schedules and the wwtp Program Summary.

## Project Controls:

• Performed required project controls functions: project schedule updates, PM/CM Tasks and Costs spreadsheet updates, document management, draw schedule updates, extranet site management, amendment documents preparation, subcontractor coordination and invoice tracking log updates.

Other PM/CM Tasks (descriptions to be included in follow-up invoices)

GPS Project Status Report Woolpert, Inc.

## **Progress as of 07-22-11**

Phase I (Trunkline)

Woolpert delivered the Phase I data and other supporting documents on July 1st.

Included in that deliverable was the following:

- Progress Report and Invoice for the month of June.
- Draft Microsoft Project Schedule (including a PDF) for the effort thru Phase II.
   Phase III (stormwater) will be added in a couple months.
- Draft Survey Statistics spreadsheet for tracking counts, percentages, progress, etc.
- Draft Phase I (Trunkline) data placed onto Woolpert's FTP site for final review.

Woolpert stated that they were hoping to get comments back from the city in the 10 business days so they can make any final adjustments prior to final approval by end of July. Also noted that the Trunkline data will most likely not be 'static' as Woolpert and the City will find necessary tweaks to the data as we roll through the Phase II basins and tie back into the trunkline.

Phase II (Remaining Sanitary Subsystems)

Woolpert began Phase II in basins 09 & 07 per the GPS Priority provided by the City. See previously provided table for GPS priorities per Phase II, plus estimated remaining manhole counts per subsystem, status of subsystem and survey counts/statistics.

Beginning the week of July 11<sup>th</sup>, Woolpert introduced a second field crew onto the project.

Subsystem 1, 9 and 7 are now completed per the field data collection.

Field crews will be off the week of July 25, and crew #2 will returning July 31<sup>st</sup> and crew #1 returning Aug 7<sup>th</sup>.

- Crew #1 will continued with subsystem 14 and then head to 11 & 10.
- Crew #2 will continue with subsystem 15 and then head to 12.

For further inquiries on the field schedule, please refer to the provided Microsoft Project schedule.

### GIS Sanitary Map Update:

John Goshert provided an email with sketches of manholes that were modified or renumbered in basin 7 and 15 by the city from further field resolutions and/or investigations. Mark Humphrey updated the sanitary GIS layer from these provided documents.

## Overall Progress of Crews:

- -The field crews are moving along fairly well. Field crews mentioned that a few items are causing some difficulties toward their daily production numbers:
- Time it takes to chase out connections between structures that are there or may not be there.
- Difficulty of opening some of these lids either slightly buried, sealed or faulty locking mechanism. Some lids are taking several attempts to loosen so crews can gain proper access for the inspection
- Maintenance of Traffic is not easy but seems to be OK for the time being. If the crews get into an area that is deemed highly dangerous even during offpeak hours we'll inform the city for some assistance

We've discussed internally that the crews should maybe carry some small amounts of liquid dye to help discern some of the connection issues. - Still being discussed

## Other Topics

### PRF Website Status:

- The PRF website has been fully developed and is currently utilizing the Phase I data for testing purposes. Minor tweaks are being made and once the system is uploaded onto our server, we should be able to provide the City with a login to evaluate.

### Project Management Website:

- Along with the development of the PRF website, a Project Management site has been developed as well. We anticipate to fully launch this site at the same time. This site will contain a tool to upload/view files, discussions, recent activities, points-of-contacts, a generic calendar and a login for the PRF Website. Hopefully this will help with some of the lost emails and/or attachments that sometimes do not make it to the City.

During recent phone conversations, Woolpert and the City discussed the following items:

- Amendments agreements Woolpert will resend signed original copies to the city due to a mix up on sending scanned copies. Four (4) copies of each amendment will be coming to Deb the week of the 4<sup>th</sup>.
- MH Re-Numbering Deb mentioned that the smoke testing data and upcoming CCTV campaign will utilize these MH Facility IDs for the sanitary manholes. And with any new manholes that are discovered in the field, or manhole IDs that may change names due to tweaking the subsystem boundaries or finding differences in connectivity from the Phase I and Phase II sweeps, we will need to track these changes or keep an "alias" naming scheme. -This needs to be discussed further with Jen and other GIS folk on a best approach.

- Pole Camera Technology Discussed the thought of implementing a pole camera for one of Woolpert's field crews to help resolve issues on-the-fly (OTF) with connectivity issues and less inaccessible features, while increasing our chances of better measurements with diameters & materials. Also could reduce the number of PRF features if resolved OTF in the field as crews inventory the manhole for the first time and reduce second pass issues.
- Photos hyperlinked into GDB Need to relook at this option as many pictures are being taken during this sanitary inventory (even though its not a requirement only stormwater outfalls), and the size of the GDB is getting larger & larger and will eventually bog down the ArcGIS project for the project team. -This needs to be discussed further with Jen and how the data is stored on the city's server.
- Geodetic Control Preliminary Sites Deb to review the site selections provided by Woolpert and provide feedback this week on accessibility/longevity (no future construction)/Visibility between pts (500-800 ft between paired pts)/GPS capability (on each pt). Best to view these locations per the provided "control monuments proposed" shapefiles along with the aerial mapping.
- Cumulative Deliverables What options are best for the City/Woolpert as it relates to delivering these final datasets? Do we continue to 'append' deliverables onto the last approved submission as we move through these basins or submit individual GDB files per deliverable? Since the process was to collect the Trunkline first (which run through a majority of the basins) there will inevitably be 'tweaks' in the system as the field crews and city revisit/tie back into the trunkline, resolve connectivity issues, rename MH IDs based on Item #2 above, etc.

GPS Project Status Report Woolpert, Inc.

## Progress as of 08-26-11

Phase I (Trunkline)

Woolpert delivered the Phase I data and other supporting documents on July 1st.

Per the agreed upon 'cumulative' deliverable, Woolpert resubmitted the Phase I data with the Pilot data, including the necessary 'edge-mapping' on a few connections between the 2 datasets.

City will provide an email of 'acceptance' of Phase I dataset.

Phase II (Remaining Sanitary Subsystems)

Woolpert continues to make progress on the Phase II basins per the GPS Priority provided by the City. See spreadsheet for updated survey counts and statistics. Plus, we have also uploaded a map overview (PDF) denoting the progress of each basin onto the project website.

Currently subsystems 9, 7, 1, 15, 4, 14 and 11 are now complete per the initial field data collection. Additional office QC will be performed on these datasets prior to submission to the City.

Field crews will be off the week of September 5th due to the Holiday and returning September 12th.

- Crew #1 will continue with subsystem 10 and then head to 08 & 02.
- Crew #2 will continue with subsystem 12 and then head to 19 & 18.

### Deliverables:

Basin's: 1, 7, 9 will up uploaded to the project website this week for your review which will also launch the PRF website for these 3 basins as well. Then we'll be shooting for another 3 basins potentially the following week.

### Other Topics

### PRF Website Status:

- The PRF website has been finalized and Woolpert hosted a WebEx for the City to illustrate the functionality. Minor tweaks were made and will soon hold the problematic features for the upcoming 3 basins for Phase II, along with Phase I data.
- City (John G.) has a spreadsheet of problematic features to keep track of said features. With the launch of the PRF website (a central repository of these problem features) we'll need the City to upload any updated feature status to this

website so it can be tracked appropriately with the necessary resolution information.

### Project Management Website:

- Along with the development of the PRF website, a Project Management site has been developed as well. We anticipate to fully launch this site at the same time. This site will contain a tool to upload/view files, discussions, recent activities, points-of-contacts, a generic calendar and a login for the PRF Website. Hopefully this will help with some of the lost emails and/or attachments that sometimes do not make it to the City.

During recent phone conversations, Woolpert and the City discussed the following items:

- Amendments agreements Woolpert received their two (2) fully executed copies.
  - MH Re-Numbering Deb mentioned that the smoke testing data and upcoming CCTV campaign will utilize these MH Facility IDs for the sanitary manholes. And with any new manholes that are discovered in the field, or manhole IDs that may change names due to tweaking the subsystem boundaries or finding differences in connectivity from the Phase I and Phase II sweeps, we will need to track these changes or keep an "alias" naming scheme. -This needs to be discussed further with Jen and other GIS folk on a best approach.
  - Pole Camera Technology Discussed the thought of implementing a pole camera for one of Woolpert's field crews to help resolve issues on-the-fly (OTF) with connectivity issues and less inaccessible features, while increasing our chances of better measurements with diameters & materials. Also could reduce the number of PRF features if resolved OTF in the field as crews inventory the manhole for the first time and reduce second pass issues.
  - Photos hyperlinked into GDB Need to relook at this option as many pictures are being taken during this sanitary inventory (even though its not a requirement only stormwater outfalls), and the size of the GDB is getting larger & larger and will eventually bog down the ArcGIS project for the project team. -This needs to be discussed further with Jen and how the data is stored on the city's server. Jen still prefers the raster data field where the photo is embedded in the gdb, including a cumulative delivery. So for each delivery we will be exporting everything into a file geodatabase and re-attaching each picture from each previous delivery (as Woolpert does not keep the photos in SDE while performing our daily QC routines). The bigger problem will come once we get more pictures. Fortunately there are no pictures for Basins 1, 9, & 7 so we just need to re-attach the pictures from the pilot and Phase 1 for the upcoming delivery.
  - Geodetic Control Preliminary Sites Deb to review the site selections provided by Woolpert and provide feedback this week on accessibility/longevity (no future construction)/Visibility between pts (500-800 ft between paired pts)/GPS capability (on each pt). Best to view these locations per the provided "control"

monuments proposed" shapefiles along with the aerial mapping. Woolpert and City had a Webex to review all 8 sites (and alternates) and then Woolpert provided screenshots for City to make the final call for the start of the reconnaissance phase. City was to make a few calls into universities & businesses for final OK. Waiting for final word from the City.

Cumulative Deliverables - What options are best for the City/Woolpert as it relates to delivering these final datasets? Do we continue to 'append' deliverables onto the last approved submission as we move through these basins or submit individual GDB files per deliverable? Since the process was to collect the Trunkline first (which run through a majority of the basins) there will inevitably be 'tweaks' in the system as the field crews and city revisit/tie back into the trunkline, resolve connectivity issues, rename MH IDs based on Item #2 above, etc. I think we're in agreement that we need to deliver a cumulative deliverable, just one GDB, so we don't have hanging pipes between delivery areas.

GPS Project Status Report Woolpert, Inc.

## **Progress as of 09-17-11**

Phase II (Remaining Sanitary Subsystems)

Woolpert continues to make progress on the Phase II basins per the GPS Priority provided by the City. Plus, we have also uploaded a map overview (PDF) denoting the progress of each basin onto the project website.

Currently subsystems 9, 7, 1, 15, 4, 14, 11, 12, 10 and 02 are now complete per the initial field data collection. Additional office QC will be performed on these datasets prior to submission to the City.

Field crews will be off the week of October 3<sup>rd</sup> and returning October 10th.

- Crew #1 will continued with subsystem 08 and then head to 19 & 18.
- Note: only one crew this trip.

### Deliverables:

Basin's: 02, 10, 12 were uploaded to the project website this past week for your review which also launched the PRF website for these 3 basins as well. Initial review from Jen seemed to be good. Only comments were the sporadic Date & Times. Woolpert stated these would be fixed shortly in an upcoming deliverable.

### Other Topics

During recent phone conversations, Woolpert and the City discussed the following items:

- Geodetic Control Preliminary Sites Deb and Brian Belcher met at Mimmo's on 9/22/11 to discuss site #2 with the restaurant owner. Then proceeded to visit most of the other sites. Notes from that field visit below:
  - Site 2 Waiting for an OK from property owners or move to potential site at nearby cemetery
  - o Site 8—Need an "OK" from the university
- Amendments for Pole Camera Technology and Obscured Features. Jack sent Deb a draft document for these services.
- PRF Website Updates The website now has ~185 problematic features available for the city. Once the City begins the resolution of these features and uploads the findings onto the PRF website, Woolpert will begin to finalize the individual sanitary basins. Jack provided the "Days Remaining" in a previous email to the City.

# City of Reading Consent Decree Calendar Quarterly Progress Report Period Ending December 31, 2011

### V. REMEDIAL MEASURES

- A. General Duties
  - 7. **Duty to Comply with Permit** The City's wastewater treatment plant (WWTP) was in compliance with NPDES permit parameters.
  - **8. Operation and Maintenance of the Facility** No update.
- **B.** Interim Measures
  - 9. Interim Compliance Environmental Management System
    - (b) Maintenance Management System No update.
    - (c) Supervisory Control and Data Acquisition (SCADA) system
      - 1. Upgrades to the Interim SCADA System No update.
      - **2. Upgrades to the SCADA System** No update.
    - (d) Pretreatment Data Management System Continuing progress. The City continues the use of a commercial pretreatment database as well as an abbreviated spreadsheet for simplicity and verification.
  - 10. Interim Plant Influent Monitoring No update.
  - 11. Interim Trickling Filter Performance Measures
    - (a) Performance Improvements No update.
  - 12. Process Control Testing No update.
  - 13. Dangerous Gas Detection No update.
  - 14. Certified Plant Operators No update.
  - 15. Operations and Maintenance Plan No update.
  - 16. Staffing Plan No update.
  - 17. Interim Wet Weather Operational Strategy No update.
- **C.** Long Term Evaluation and Construction Schedule This remedial measure reporting includes activities associated with pump stations, force mains and Act 537 planning.

The City has awarded a contract for the WWTP's 42" flow-meter replacement and held a groundbreaking ceremony. This meter project will confirm the wastewater treatment plant's (WWTP's) present flows and loadings. This \$2,958,000 project will be financed with a combination of two \$500,000 EPA STAG grants and Sewer Fund/Bond reserves.

The City's PaDEP 537 Planning Special Study contract with the SSM Group is complete. This study confirmed the future flows and loadings for the WWTP. The next steps are updating the reports as described in Consent Decree paragraphs 18a, 18b, and 19 followed by submission of the reports to DoJ, EPA, and DEP for approval. The reports will then be submitted to Berks County for comment and

then a public comment period follows. The approved report will form the basis of the City's updated Capital Improvements Plan. The project is being financed with Sewer Fund/Bond reserves.

The City's selected alternative of designing and constructing a new 42" force main (FM) is 90% complete. The old FM will be used for redundancy with limited lining of the river crossing only. The project cost is now estimated at \$12,000,000 and is being financed with a \$5,000,000 H2O grant, Sewer Fund/Bond reserves and possibly a PennVEST grant and/or loan. The FM project is scheduled to start in the second quarter of 2012.

Additionally, there is an emergency project under way that will temporarily bypass the failing section of the existing FM. This is an interim measure to avoid leakage to the Schuylkill River. The \$1,840,000 emergency project contract has been awarded and is being financed by Sewer Fund reserves. The emergency work has started and is expected to complete 3/5/2012.

The Sixth and Canal Pump Station (6&CPS) reevaluation will also need updating due to the findings of the 537 Planning Special Study.

Weston Solutions is finalizing their ground and groundwater analysis for the contamination found at the 6&CPS.

## 18. Treatment Plant Alternatives Submission

- (a) Existing Plant Process Evaluation Report An update to the Existing Plant Process Evaluation Report will be prepared now that the Act 537 Special Study is completed.
- **(b)** Evaluation of Treatment Alternatives Report An update to the Evaluation of Treatment Alternatives will be prepared now that the Act 537 Special Study is completed.
- 19. Capital Improvements Plan An update to the Capital Improvements Plan will be prepared now that the Act537 Special Study is completed.
- **20.** Request for Proposals –Hazen & Sawyer has completed some preliminary evaluation and study work and is assisting in the preparation of a Request for Proposal (rfp) for a Primary Anaerobic Digester Rehab design project. There is a \$1,000,000 H2O grant available toward this rehab project.
- 21. Permit Applications and Design The permitting for the 42" FM project and the 42" FM emergency bypass projects is in process. The 42" FM project design is 90% complete and the 42" FM emergency bypass design is complete.
- 22. Permitting The permitting for the 42" flow-meter project is complete.
- 23. Construction Completion No update.
- **24.** Start-Up and Operation No update.
- 29. Wet Weather Operation Plan No update.

## D. Collection System

- 25. GIS Mapping System In progress. See below.
  - (a) Purpose of GIS System Not applicable.
  - (b) GIS Mapping of the Sanitary Sewer Collection System In progress. Phase one is the larger diameter sanitary sewer system required for the hydraulic modeling with Phase two the remainder of the sanitary sewer collection. Woolpert proceeded with two crews upon beginning phase two data collection. The website for resolving problem features was launched with issues still being addressed. Woolpert submitted the remainder of phase two data for City review and follow-up. Some difficulties accessing and using the website for follow-up delayed City investigation. Woolpert also submitted contract amendments for consideration to improve the monumentation and reduce the amount of follow-up required by using different equipment while in the field. The project management team at Woolpert has been changing this quarter with details to be resolved and discussed in a first quarter meeting with the City. Further project details are in the attached report.
  - (c) GIS Mapping of the Storm Water Collection System In progress. The third phase for field data collection and GIS mapping is the storm water system. This is included in the new GPS contract discussed above.

### 26. Sanitary Sewer System Evaluation Program

(a) I/I Analysis by Subsystem

The City continued investigating and updating the mapping required for the coordination of the collection system investigative, modeling, and rehabilitative work.

- 1. Baseline Flow and Rainfall In Progress. The hydraulic modeling of the interceptors is a key to re-evaluating priorities based on projected bottlenecks that may exist. The GIS inventory of the Phase 1 interceptors is required for this modeling.
- 2. Hydraulic Modeling In Progress. The pilot and first phase of the GPS project discussed in paragraph 25(b) provide the information required for this hydraulic modeling. With learning the prior consultant will not be performing this work, an enhanced scope of services to include this and other collection system engineering support is being finalized to request proposals.
- (b) Sewer System Evaluation Survey In Progress. The sanitary manhole numbering system is refined continually as field inventory show additional or missing manholes and will continue as the inventory and system investigations progress. A system for using aliases or tracking is necessary so all data can be referenced in the future. One area still needs to be smoke tested prior to the contractor finalizing the report. Changes not incorporated in the index map have the data from that area in question regarding completeness. Weather permitting, this will be completed in the first quarter. The computerized maintenance management system implementation project made progress toward restarting full-scale for geospatially-oriented tracking of preventive and corrective maintenance as

well as repairs. The City is purchasing updated PCs for staff to be using the system as well as purchasing the server to host the software.

- **27.** Rehabilitation Plan No progress. *The SSES is required to be complete in* order to develop the Rehabilitation Plan.
- 28. Rehabilitation of Priority Areas of Collection System No progress.
- 29. Wet Weather Operation Plan Completed.

## E. Pretreatment Program

- **30.** General Duty In progress. The City has an approved pretreatment program and continues to regulate industrial users in the collection system.
- 31. Enforcement Response Plan (ERP) Implementation In progress. The City continues to follow the ERP in order to encourage compliance from all industrial dischargers. One industry completed the installation of a new pretreatment system during the process of finalizing a consent order and agreement mandating its installation. This system is currently operational and the industry is in compliance.
- 32. ERP Penalty Escalation and Compliance Schedule In progress and continuing. The City continues escalating penalties for all industries that are in significant non-compliance for a given parameter for two consecutive quarters. As penalty escalation had not been detailed in the ERP, the City has documented the process and amounts for consistency and as a reference tool.
- 33. ERP Order, Permit Revocation, and Federal Referral In progress. The City continues escalating the enforcement actions focusing on the financial penalties assessed to permittees who remain in significant non-compliance. The City continues to confer with US EPA while attempting to have industries achieve compliance. One industry has been problematic for an extended time following a compliance agreement in recent history. US EPA requested additional information from the industry and has been speaking with the City regarding this permittee's recent compliance. The City meet with a representative for the industry and is scheduling a meeting in the first quarter with an authorized representative. Following this meeting, the City will discuss the status and direction to keep US EPA apprised. -
- 34. Local Limit Adoption by Contributing Municipalities In progress. All the municipalities with permitted industries have adopted the ordinance. Electronic versions of the City's sewer use ordinance had been provided to each municipality, engineer, and/or solicitor to prepare for adoption. This requirement is detailed in the draft version of a revised intermunicipal agreement being circulated to and reviewed by the contributing municipalities.
- 35. Non-Residential Connection Evaluation and Investigation In progress. The City has been working with the contributing municipalities to obtain this information to summarize, survey, and evaluate nonresidential users in the service area that may need to be permitted.
- **36.** Increased Monitoring for Violators In progress and continuing. The City continues to increase City sampling and encourage increased self-monitoring for frequent violators. In general, permits may be amended or re-issued requiring multiple resamples for parameters with prior compliance issues. Some permits

municipality, is detailed in the draft version circulated to and reviewed by the 35. Non-Residential Connects. The City has been working with information to summarize, surfarea that may need to be perm 36. Increased Monitoring for continues to increase City sarfrequent violators. In general multiple resamples for parant.

Page 4 of 18

require increased frequency of monitoring for multiple quarters of compliance prior to returning to a less frequent self-monitoring schedule. Additional monitoring by both the City and the industry is tracked and reported.

- **37. Pretreatment Computerized Management System** In progress and continuing. The City continues data entry into a commercial pretreatment database as well as an abbreviated spreadsheet upon receipt of analytical results from both City and industrial sampling.
- **38.** Local Limits Re-Evaluation Completed. Evaluation submitted to US DoJ and US EPA on May 5, 2006. Comments were received from US EPA and the City initially worked with B&V to address the comments and concerns.
- **39. Quarterly SNC Reports to US EPA** In progress. The City has been monitoring penalty payment status and will continue to investigate errors in the penalty payment and posting as reported to the US EPA. The City is working interdepartmentally to resolve this issue for the past and determine how to do ongoing with accurate tracking and reporting in all systems as the goal.

## F. Funding

**40.** Funding – In progress. The 2012 budget was prepared and presented to City Council with the budgeted transfer amount remaining at \$3,000,000, per the consent decree. The City has implemented a schedule of monthly transfers in order to transfer the \$3 million over the course of the year instead of one lump sum. As of January 30, 2012, the Sewer Enterprise fund had a balance of \$28,199,021.66.

As we move forward, the critical path item is now the new Intermunicipal Agreements (IMA). No later than the end of February, the municipalities must agree to the terms so the issuance of approximately \$100 million of revenue bonds can proceed. Unfortunately, at a meeting with the Antietam Valley Municipal Authority on January 26 did not go well as there appears to be resistance to the new agreement. This evening, January 31, we are meeting with the Township of Cumru and the Borough of Mohnton to apprise them of our activities and to stress the importance of the IMA. However, we were told unofficially on January 27 that we will now receive "push back" on the IMA by one or two of our largest users. We have been working actively on the IMA for two years without receiving comments from any of the municipalities other than Muhlenberg and Laureldale and any last minute drive to hold the City hostage could disrupt the positive momentum we have been trying to generate during the past two years.

## VI. REPORTING REQUIREMENTS

- 41. Report Contents and Certification
  - (a) Remedial Measures Paragraphs 7 through 40 See above numbered sections.
  - **(b) Anticipated Problems** See italics in above numbered sections.
  - (c) Additional Matters See italics in above unnumbered sections.
  - (d) Certification Statement -

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted, is to the best of my knowledge and belief, true, accurate, and complete.

Public Works Director

City of Reading October 2011

Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

### **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Critical items of work included: project updates w/ PaDEP, including a briefing regarding the Emergency Bypass project, 42" force main design support, including the emergency bypass, flow meter project bidding and assistance with contractor selection, 6CPS site contamination coordination, digester rehabilitation statement of work preparation and finalization of the Act 537 Plan. Anticipated future items of (November) work include: flow meter bid evaluation and contractor selection/NTP, analysis of the Act 537 Plan, 42" force main design support, including the emergency bypass and digester rehabilitation scoping. A more detailed task breakdown of the October work effort follows (also see respective subcontractor invoices).

## Project Management (Hill: see invoice):

- Force Main (42") Design: provided assistance to the designer and participated in a (micro-tunneling) design review workshop; reviewed the designer's schedule and provided detailed comments. Coordinated the designer's redundancy (i.e. new pipe) recommendation amongst the PM/CM team.
- Force Main (42") Emergency Bypass: attended a site walk thru with the contractor, designer, client; attended a meeting at the PaDEP offices with client and designer; provided assistance to client regarding procurement options and participated in design related discussions, including pipe routing, material, scheduling and emergency permitting.
- WWTP Flow Meter project: assisted with the finalization of the construction bid documents/contract, including Addendums. Attended a pre-bid meeting and assisted with contractor selection.
- Primary Digester Rehabilitation: reviewed and submitted a PM/CM statement of work.
- Act 537 Special Plan of Study: reviewed consultant's Act 537 deliverables attended a project update and had discussions with internal team regarding refinement of the Phase I/II/III reports.
- Financial, Grant Funding: participated in discussions and correspondence regarding respective grants with client and project team, including assisting with a Letter of No Prejudice and draft application regarding the force main project and the PaH2OI grant regarding the flow meter project. Participated in several meetings regarding the wwtp Plan of Finance.
- Legal: participated in internal Inter Municipality Agreement (IMA) discussions, including a brief to the Muhlenberg Township Authority, and assistance with DoJ correspondence.

- Prepared for and attended required meetings/teleconferences: City Manager Updates, brief to City Council, legal team discussions, financial team coordination (Grant Funding, Plan of Finance) and project team meetings.
- Performed required project controls/administrative functions: progress and meeting coordination, preparation of meeting action items, project correspondence/status, invoice/monthly reports, PM/CM Tasks/Budget worksheet, assistance with the DoJ Quarterly Report, and preparation of a flow meter CM support services statement of work.
- Updated the Project Master, Construction, Draw Schedules and the WWTP Program Summary.

## Project Controls (Hill: see invoice):

Performed required project controls functions: project schedule updates, PM/CM
Tasks and Costs spreadsheet updates, document management, draw schedule
updates, extranet site management, consent decree tracker updates, amendment
documents preparation, creation of action items spreadsheet, NTP preparation,
subcontractor coordination and invoice tracking log updates.

## *Grant Funding (DMGA: see invoice):*

- Reviewed draft documents regarding STAG grant information request.
- Attended meeting in Reading to discuss H2O PA Grant administration.
- Followed up with activities from October 6<sup>th</sup> meeting
- Communications with Erick Emerson regarding Emergency Purchase under H2O PA
- Participation in calls with Erick Emerson and email of DCED response on use of.
- Followed up on letter of No Prejudice.
- Completed letter of No Prejudice form and e-mailed city.
- Communicated with Derold Hay of Fox Rothschild regarding Letter of No Prejudice.
- Reviewed DBE Guidance Document.
- E-mailed Reading regarding DBE Guidance Document and impact of DBE solicitation requirements on emergency project for PennVEST funding.
- Required activity related to 2<sup>nd</sup> opinion reports, DEP DBE requirements and other items related to PennVEST funding.

### CD Paragraph 18 Issues (H&S: See Invoice):

- Provided technical assistance regarding the plug valves to be used on the force main.
- Provided technical assistance for the emergency bypass and associated permitting.

## Act 537 Special Plan of Study RFP (H&S: see invoice):

- Preparation for and attendance at October 5<sup>th</sup> meeting.
- Preparation for and attendance at October 21<sup>st</sup> meeting.
- Review of Final Draft Report.

Flow Meter Design Support and Supplemental Soil Boring Investigation (Weston: see invoice):

- Attendance at Construction Pre-Bid Meeting at fire training center on October 4, 2011
- Preparation of responses to RFI's from contractors bidding on flow meter construction project.
- Reviewed PADEP clean fill policy and prepared recommendations for excavated soils management at Fritz Island during flow meter construction project.
   Associated teleconference with project team on October 18, 2011 to discuss recommendations and path forward.
- Discussions between client and project team; prepared, reviewed and responded to project correspondence.
- Project controls, budgeting and planning.

## Force Main (42") Design Support (Weston: see invoice):

- Prepared comment log for 60% design review documents.
- Attended 60% design review meeting at WWTP for the micro tunneling scope of the 42-in force main project on October 4, 2011.
- Discussed design on 42 inch force main with project team. Prepared, reviewed and responded to associated project correspondences.
- Project controls, budgeting and planning.

### Force Main Environmental Assessment:

- Provided technical and coordination support for preparation of emergency permit for on-call repairs to failed sections of existing 42-in steel force main between 6&CPS and WWTP.
- Participated in teleconference with project team on October 10, 2011 regarding emergency permitting approach, responsibilities, schedule and logistics.
- Discussions with client and project team; prepared, reviewed, and responded to associated project correspondence.
- Project controls, budgeting, and planning.

### Force Main (42") Supplemental Permitting Studies (Weston: see invoice):

- Prepared emergency permit for on-call repairs to failed sections of existing 42-in steel force main between 6&CPS and WWTP.
- Discussions with client and project team; prepared, reviewed, and responded to associated project correspondence.
- Project controls, budgeting and planning.

### 6CPS Environmental Investigations & Hazmat Survey (Weston: see invoice):

- Continued assessment of potential remedial technologies for treatment of excavation contact water (groundwater) that will be encountered at the 6&CPS during the construction of the 42-in force main project.
- Coordination, planning and execution of supplemental groundwater sampling event to collect data to support design of an excavation water treatment system for

- the 6&CPS site. Samples were collected on October 7, 2011 for analysis by an offsite analytical laboratory contractor (HCV).
- Discussions with client and project team; prepared, reviewed, and responded to associated project correspondence.
- Project controls, budgeting and planning.

City of Reading Wastewater Treatment Plant Upgrades PM/CM Monthly Progress Report Hill/Weston/Hazen and Sawyer

### **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Critical items of (November) work included: flow meter (builder's) contract finalization, 42" force main design support, including the emergency bypass, 6CPS site contamination coordination, review of the final report for the Act 537 Special Study, and refinement of the digester rehabilitation statement of work. Support work included ongoing financial and legal support including EPA STAG Grant coordination and rate impacts regarding the WWTP's Capital Improvements Plan. Anticipated future items of (December) work include: finalization of the flow meter contract, issuance of the NTP and participation in a pre-construction meeting and ground breaking ceremony; finalization of the contract for the Emergency Bypass project, ongoing force main design support, scoping of the Phase I/II/III reports and the digester rehabilitation project; and continued assessment of the 6CPS contamination issue. A more detailed task breakdown of the November work effort follows (also see respective subcontractor invoices).

## Project Management (Hill: see invoice):

- Force Main (42") Design: provided assistance to the designer and participated in a
  design review workshop (Nov 4<sup>th</sup>); reviewed the designer's schedule and provided
  detailed comments. Coordinated potential procurement strategies with Fox
  Rothschild.
- Force Main (42") Emergency Bypass: provided assistance to client regarding procurement options and participated in design related issues including scheduling and emergency permitting.
- WWTP Flow Meter project: assisted with the finalization of the construction contract and NTP.
- Primary Digester Rehabilitation: held project scope discussions with Hazen & Sawyer.
- 6CPS: participated in discussions with the client and Weston regarding water management options.
- Act 537 Special Plan of Study: held project scope discussions with H&S regarding refinement of the Phase I/II/III reports.
- Financial, Grant Funding: participated in discussions and correspondence regarding respective grants with client and project team, including assisting with the flow meter's EPA STAG grants. Letter of No Prejudice (Emergency Bypass) and draft application regarding the force main project. Participated in several meetings regarding the WWTP's sewer rates model.
- Legal: participated in internal Inter Municipality Agreement (IMA) discussions, including a brief to the Muhlenberg Township Authority.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, brief to City Council, legal team discussions, financial team coordination

- (Grant Funding, Plan of Finance) force main (redundancy) meetings and project team meetings.
- Performed required project controls/administrative functions: progress and meeting coordination, preparation of meeting action items, project correspondence/status, invoice/monthly reports, PM/CM Tasks/Budget worksheet, preparation of a draft Reconciliation Amendment II, and finalization of a flow meter CM support services statement of work.
- Updated the Project Master, Construction, Draw Schedules and the WWTP Program Summary.

## Project Controls (Hill: see invoice):

• Performed required project controls functions: project schedule updates, PM/CM Tasks and Costs spreadsheet updates, document management, draw schedule updates, extranet site management, amendment documents preparation, NTP preparation, subcontractor coordination and invoice tracking log updates.

## Grant Funding (DMGA: see invoice):

- Responded to e-mails regarding STAG grant information.
- Communications with Tony Vesay, Erick Emerson and Derald Hay regarding invoicing requirements for H2O PA Program and emergency bypass project.
- Communications with Erick Emerson regarding emergency force main project.
- Communications with Tess Schlupp regarding PennVEST application date and DBE requirements.
- E-mailed to DEP and PennVEST regarding DBE requirements and Letter of No Prejudice.

### Design Review/Tech Support (H&S: See Invoice):

- Provided overall administration, project management and coordination for the project(s).
- Provided technical assistance regarding the location of the proposed force mains.
- Provided technical assistance for the emergency bypass.

### Capital Improvements Plan – Base Work (H&S: see invoice):

• Provided technical assistance related to the preparation for the next phases of the project.

### Act 537 Special Plan of Study RFP – Base Work (H&S: see invoice):

- Review of Final Report and appendices
- Review of the reports in terms of the EDUs being used for sewer rate calculations.

### Primary Digester Rehab Design Support Service – Base Work (H&S: see invoice):

- Provided technical assistance for the on-going digester assessment
- Attended site visit and meeting on November 17<sup>th</sup>.

City of Reading
Wastewater Treatment Plant Upgrades
PM/CM Monthly Progress Report
Hill/Weston/Hazen and Sawyer

### **Executive Summary:**

The PM/CM team continued work on Consent Decree related tasks as well as other supporting wastewater treatment plant (WWTP) tasks. Critical items of December work included: finalization of the flow meter contract, issuance of the contactor's NTP and participation in a preconstruction meeting and ground breaking ceremony; finalization of the contract for the Emergency Bypass project, ongoing force main design support, scoping of the updated Act 537 Special Study and the digester rehabilitation project; and continued assessment of the 6CPS contamination issue, including a teleconference with PaDEP representatives. A WWTP update briefing was also provided to Spring Township and a progress update meeting held with PaDEP representatives in Reading. Anticipated items of future (January) work include: continued work regarding the flow meter and emergency bypass projects; refinement of the force main design, updating the Act 537 Special Study and respective reports (e.g. Capital Improvements Plan), client and regulatory discussions regarding the digesters. A more detailed task breakdown of the December work effort will follow with the PM/CM's respective subcontractor invoices/reports.

## Project Management (Hill: also see pending invoice/report):

- Force Main (42") Design: provided assistance to the designer and participated in design review workshops (December 5<sup>th</sup>, December 16th) and a micro-tunneling workshop (December 21st); reviewed the designer's schedule and provided comments and participated in a boundary issues meeting with the client and designer. Submitted front end bid document comments to Fox Rothschild.
- Force Main (42") Emergency Bypass: participated in design related issues including scheduling and emergency permitting and easement issues.
- WWTP Flow Meter project: participated in a contractor kick-off meeting; participated in an internal flow coordination meeting to review the contractor's schedule and review the submittal process.
- Primary Digester Rehabilitation: held project scope discussions with Hazen & Sawyer and client.
- 6CPS: participated in discussions with the client and Weston regarding water management options; participated in a teleconference with the client and PaDEP representatives.
- Act 537 Special Plan of Study: reviewed Hazen & Sawyer's scope of work and participated in client discussions.
- Financial, Grant Funding: participated in discussions and correspondence regarding respective grants with client and project team, including assisting with potential FEMA/PEMA grants and PennVEST draft application discussions regarding the force main project. Participated in several meetings regarding the WWTP's sewer rates model and completed a Capital Improvements Analysis and a contingency Draw Schedule.
- Legal: participated in internal Inter Municipality Agreement (IMA) discussions and a brief to Spring Township.
- Prepared for and attended required meetings/teleconferences: City Manager Updates, legal team discussions, financial team coordination (Grant Funding, Plan of Finance) project team meetings and a project update with PaDEP representatives.
- Performed required project controls/administrative functions: progress and meeting coordination, preparation of meeting action items, project correspondence/status,

invoice/monthly reports, PM/CM Tasks/Budget worksheet, finalization of Reconciliation Amendment II, finalization of the flow meter CM services proposal.

• Updated the Project Master, Construction and Draw Schedules.

# **Project Notes:**

- At the beginning of November, Woolpert's Project Manager was changed to John Cestnick. Per the contract requirements, John's resume was submitted for review. Upon request, Woolpert also provided a revised project organization chart and additional resumes of other Woolpert staff involved with this project.
- 2) On December 21, Ed Singer and Linda McCoy met with the City to discuss both the Cityworks project and this GPS Inventory Project. Ed Singer will be involved with both projects, and will provide the continuity between the two projects.
- 3) Project meetings are being scheduled for January 31 and February 1 to review the project's status, and outstanding questions, issues, and concerns.

# Follow-up Items:

The following items have been identified as unresolved or needing to be followed-up with, and should be discussed at the upcoming Project Review Meetings.

- 1) Geodetic Control Sites.
  - a) Need confirmation on the final mark design and disk wording.
  - b) Need final approval on the location of Pair #2 at the City park, and about Pair #5 located adjacent to the City office.
    - i) Pair #5: Deb was concerned that the pair Woolpert wanted to set at the office will be disturbed due to the frequent train traffic, which is within 30-40 feet. The vibrations from the train will not cause problems to the final elevation nor the horizontal position.
  - c) Final approval for Pair #8 (and all others) has been received.
- 2) Amendments for Pole Camera Technology and Obscured Features. --Jack sent Deb a draft document for these services.
- 3) PRF Feature updates and review
  - a) Total count submitted to the City: 290

- b) Total count past due: 218
- c) Total replies from the City: 52
- d) Total "Ready for Woolpert": 25
- 4) Review of the Project Plan.
- 5) Review of the Project Schedule.
- 6) Review of estimated vs. actual feature counts.
- 7) Woolpert to deliver Project Reference Manuel (to include Field Procedures).
- 8) Stormwater System Data Collection:
  - a) How to identify private systems vs. City system?
  - b) Review and define data collection process.
  - c) Review features and attribution to be collected and populated.